



Interim Draft Report

Transportation Existing Condition Report

February 26, 2025

Walker Environmental Group

TYLin Project #: 100482

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1 Introduction

This report provides an overview of the existing transportation conditions within the study area for the South Landfill Phase 2 Environmental Assessment (EA). The Minister of the Environment, Conservation and Parks (Minister) Approved Terms of Reference (TOR) for the EA included a preliminary description of the existing environmental conditions and committed to expand upon this description during the EA.

Walker Environmental Group (Walker) initiated a Comprehensive EA under the Ontario EA Act seeking approval to expand the capacity of its existing South Landfill located at the Walker Resource Management Campus (Campus) in Niagara Falls. The South Landfill is an essential component of Walker's Campus since it began operating in 2009 under Environmental Compliance Approval (ECA) No. 008-78RKAM, as amended, and provides safe, reliable, and affordable disposal capacity for solid, non-hazardous waste from residential and industrial, commercial, and institutional (IC&I) sources to its customer base within the City of Niagara Falls, the Regional Municipality of Niagara, and the Province of Ontario. The South Landfill's total approved disposal capacity is 17.7 million m³ and is expected to reach maximum capacity by 2029 to 2031.

The proposed Phase 2 of the South Landfill would extend its approved capacity by approximately 18 million m³ over a 20-year period, ensuring Walker can continue to provide essential residual waste disposal services to its existing customer base. Walker is proposing to locate the additional disposal capacity (Phase 2) to the east of the existing South Landfill within the area currently occupied by Walker's Southeast Quarry. The proposal would maintain the existing landfill service area, as well as the annual volume of solid, non-hazardous waste from the sources currently accepted.

The EA Act requires that proponents describe the environment that may potentially be affected or may reasonably be expected to be affected, directly or indirectly, by the Alternative Methods of Carrying Out the Undertaking (Alternative Methods) proposed as part of an EA. The description of the existing environmental conditions will provide the baseline for the assessment of the potential effects of the proposed Undertaking, which will be conducted during the EA. This report focuses on characterizing the existing conditions within the study area for the South Landfill Phase 2 EA for Transportation.

Previously, a Traffic Impact Assessment Report was prepared by HDR (formerly iTRANS Consulting Inc.), in February 2006, for the Phase 1 South Landfill Environmental Assessment.

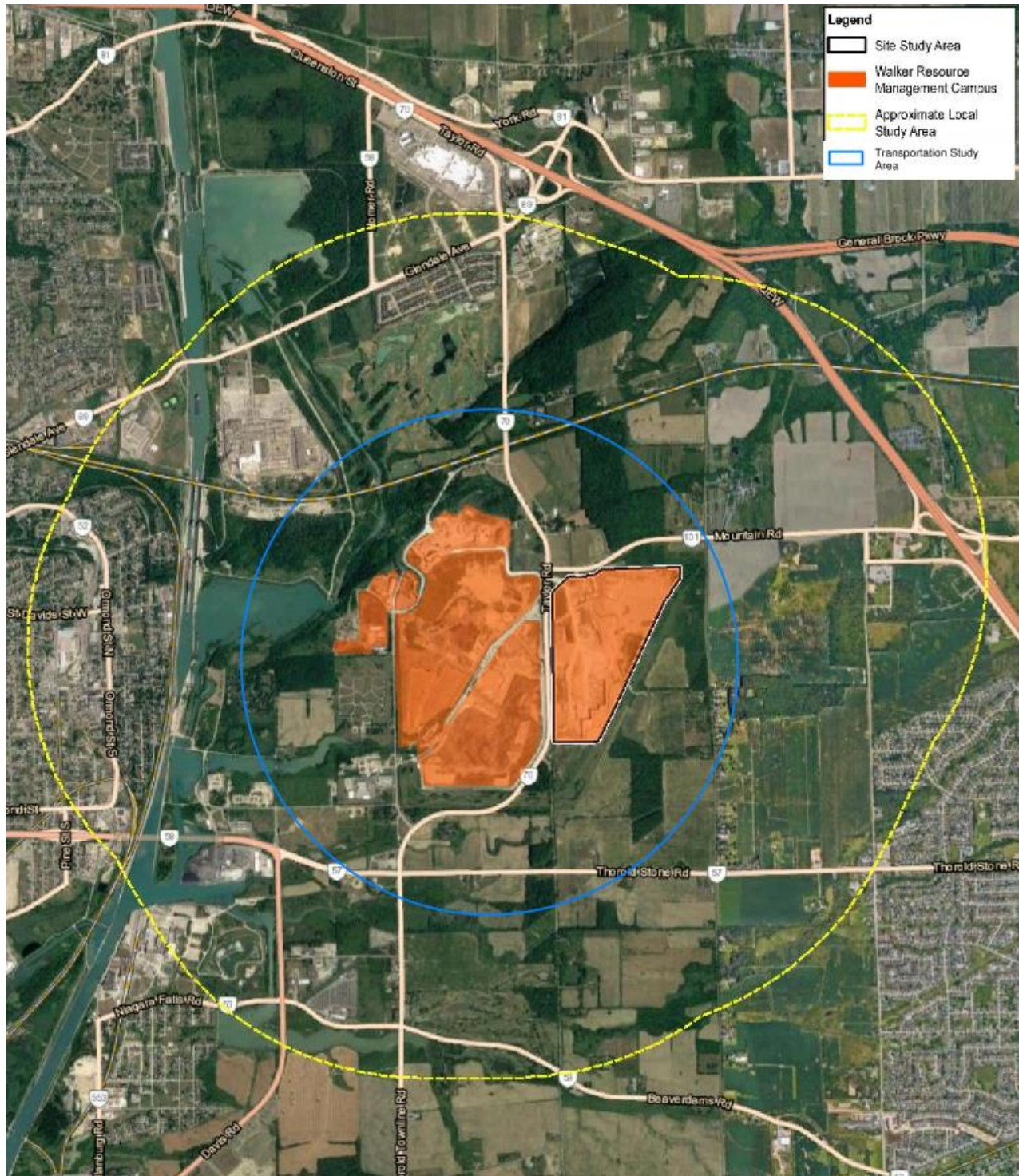
2 Study Area

Walker’s campus is located at 2800 Thorold Townline Road, and the Phase 2 site is located within the City of Niagara Falls, with the City of Thorold to the west, the Town of Niagara-on-the-Lake to the north and the City of St. Catharines to the northwest. Walker is proposing to locate the additional disposal capacity (Phase 2) to the east of the existing South Landfill within the area currently occupied by Walker’s Southeast Quarry.

The proposed expansion area for South Landfill Phase 2 is currently licensed for quarry operations. The licensed area includes an extraction zone, internal haul roads, and landscape berms with vegetation along the perimeter of the quarry for screening purposes. There are internal (non-public) entrances located to the north and northwest, accessible via Mountain Road and Taylor Road, respectively.

The area immediately surrounding the study area is primarily characterized by industrial and agricultural land uses, with some rural residential and institutional properties scattered throughout. The landscape is generally flat to gently rolling. Land around the study area not used for industrial purposes is typically used for agriculture. As a result, the landscape features open grassland fields, bordered by hedgerows and fence lines, and interspersed with both small and large mature deciduous woodlots. **Figure 2-1** illustrates the site study area and the transportation-specific study area. The roads and intersections assessed are part of this traffic study are detailed in **Section 4** of this report.

Figure 2-1 South Landfill Phase 2 Preliminary Study Area



Source: GHD, Proposed Terms of Reference, Walker South Landfill Phase 2 Environmental Assessment

3 Methodology

The base year to evaluate existing traffic conditions for this study is 2025. Intersection capacity analysis was undertaken at the study intersections throughout the study area using the Synchro/Sim Traffic software package with the methodology outlined in the Highway Capacity Manual 2000.

The effectiveness of an intersection's operations is measured in terms of average vehicular delay, the volume-to-capacity ratio (v/c), and vehicle queuing, generally distilled down to a Level-of-Service (LOS), ranging from LOS 'A' to LOS 'F'. LOS 'A' is the 'best' level of operation for an intersection representing little or no delay and generally free flow conditions where the general level of comfort and convenience experienced by motorists is excellent. At the other end of the spectrum, LOS 'F' represents an at-capacity condition usually associated with heavy congestion, and occasionally severe peak period delays and queuing. It should be noted that operations measured as LOS 'A' up to and including LOS 'E' are considered 'acceptable' in most urban (and in many rural) environments.

V/c ratios express an individual performance metric of how specific movements (as well as overall signalized intersections) are operating in relation to their theoretically calculated capacity. A ratio of 1.00 represents an at-capacity condition (demand = capacity) and could have characteristics similar to those described above for LOS 'F'. Anything better than (i.e., below) a v/c ratio of 0.90 is typically considered to be acceptable and even ratios between 0.90 and 1.00, can be acceptable to drivers in many circumstances.

Measures and estimates of vehicle queuing provide yet another layer of information with which to assess traffic operations. In areas where there is tight spacing of intersections or otherwise limited space, even though acceptable LOS or v/c ratios might be reported, vehicle queuing might suggest operational problems (or vice versa) in the local context. Queuing results, and the way in which they are interpreted, are therefore very case sensitive and should be viewed specific to a road network context.

As per Niagara Region's Transportation Impact Assessment Guidelines, Critical movements should be identified according to the following:

- At signalized intersections, movements with a v/c ratio greater than 0.85 and/or LOS "E" or worse are deemed to be "critical" in terms of operations. Movements that exceed those thresholds shall be evaluated for possible operational improvements.
- At unsignalized intersections, movements expected to operate at LOS "D" or worse and/or where the estimated 95th percentile queue length for an individual movement exceeds the available queuing space.
- Any site accesses where entrances or egress is anticipated to be blocked by traffic queues from an upstream/downstream intersection.
- An exclusive turning movement in which the 95th percentile queue will exceed the available storage space.
- Exclusive left- and right-turn lanes that are inaccessible due to the length of queues in the adjacent through lanes.

Turning movement counts were conducted for all the intersections. Five-year historic collision data

for the study area and signal timing plans for the applicable signalized intersections were also obtained from the Niagara Region for analysis. Additionally, the City of Thorold's Guidelines for Transportation Impact Studies (2018), Niagara Region Transportation Master Plan (October 2017), Thorold Transportation Master Plan (June 2020), and the 2022 Niagara Official Plan were also reviewed and are utilized for this study.

4 Existing Transportation Network

4.1 ROAD NETWORK

The existing roadways within the study area boundary are described as follows and illustrated in **Figure 4-1** with their lane configurations:

Thorold Stone Road (Regional Road 57) is an east-west arterial road with a four-lane cross-section (two lanes per direction) under the jurisdiction of Niagara Region. It extends from Davis Road (Highway 58) in the west to Stanley Avenue (Regional Road 102) in the east. It has paved shoulders along both sides. The posted maximum speed limit within the study area is 80 km/hr.

Taylor Road (Regional Road 70) is a north-south arterial road, with a two-lane cross-section (one lane per direction) under the jurisdiction of Niagara Region. It extends from York Road (Regional Road 81) to Thorold Stone Road. It has paved shoulders along both sides. The posted speed limit within the study area is 70 km/hr.

Mountain Road (Regional Road 101) is an east-west arterial road, with a two-lane cross-section (one lane per direction), under the jurisdiction of Niagara Region. It extends from Taylor Road (Regional Road 70) in the west to Stanley Avenue (Regional Road 102) in the east. It has paved shoulders along both sides. The posted speed limit within the study area is 70 km/hr.

Thorold Townline Road is a north-south arterial road, with a two-lane cross-section (one lane per direction), under the jurisdiction of the City of Thorold north of Thorold Stone Road and is under the jurisdiction of Niagara Region south of Thorold Stone Road where it is designated as Regional Road 70. The posted speed limit within the study area is 50 km/hr.

Beechwood Road is a north-south arterial road, with a two-lane cross-section (one lane per direction) under the jurisdiction of the City of Niagara Falls. It extends from Taylor Road (Regional Road 70) in the north to Brown Road in the south. The posted maximum speed limit within the study area is 80 km/hr.

Garner Road is a north-south arterial road under the jurisdiction of the City of Niagara Falls, extending from Warner Road in the north to Brown Road in the south. The posted speed limit within the study area is 80 km/hr which reduces to 60 km/hr in the southern section.

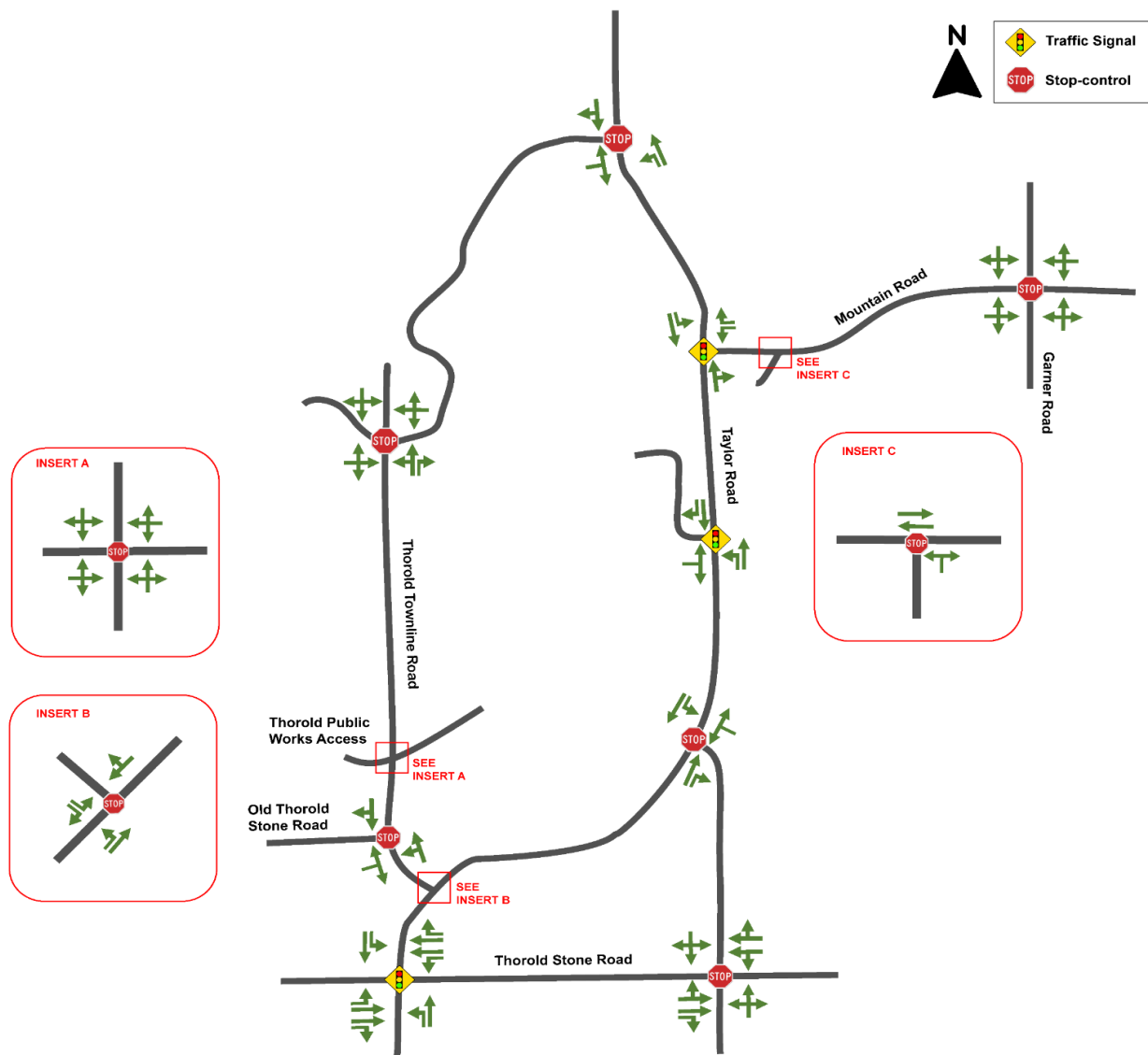
There are currently four existing Campus access roads that connect with the public road network:

- Landfill East Access (landfill access only), located on the west side of Taylor Road (Niagara Regional Road 70) approximately 600 meters south of its intersection with Niagara Regional Road 101 (Mountain Road).

- North Access (primarily quarry access), located on the west side of Niagara Regional Road 70 (Taylor Road) approximately 800 meters north of its intersection with Niagara Regional Road 101 (Mountain Road).
- Landfill Northwest Access (Public Access), located at the intersection of Thorold Townline Road and Regent Street south of the Walker head office at 2800 Thorold Townline Road.
- Quarry Access (maintenance only, non-public access), located south side of Mountain Road.

The main landfill access (east access) connects to a paved two-lane internal road from which trucks and other vehicles can access various parts of the South Landfill site via unpaved pathways. The Southeast Quarry on the east side of Taylor Road is connected to the remainder of the Campus facilities via a one-lane underpass of Taylor Road, located approximately 50 meters south of its intersection with Mountain Road.

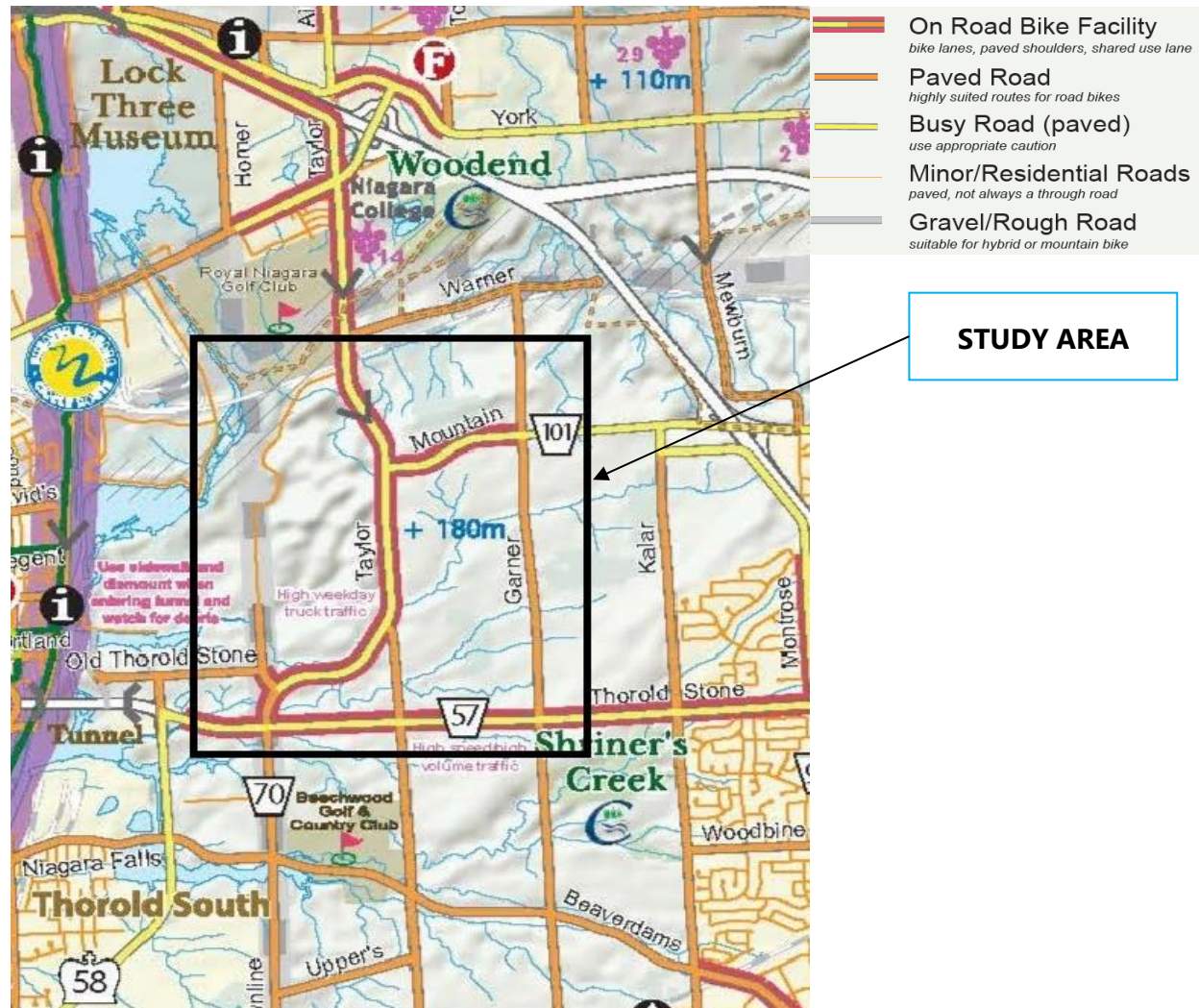
Figure 4-1 Existing Road Network



4.2 ACTIVE TRANSPORTATION NETWORK

The study area is located outside the urban boundaries designated by the Niagara Falls Official Plan, and there are no dedicated pedestrian or cyclist facilities along the adjacent roads. The roads in the study area within a 1 km radius of the Walker Campus do not have pedestrian sidewalks. According to the current Niagara Region Transportation Master Plan (TMP) as well as cycling maps from the City of Thorold and the City of Niagara Falls, existing cycling routes are indicated on Taylor Road, Thorold Stone Road, and Mountain Road, as shown in **Figure 4-2** however, there are currently no marked cycling facilities on these roads, which consist only of paved shoulders.

Figure 4-2 Cycling Facilities



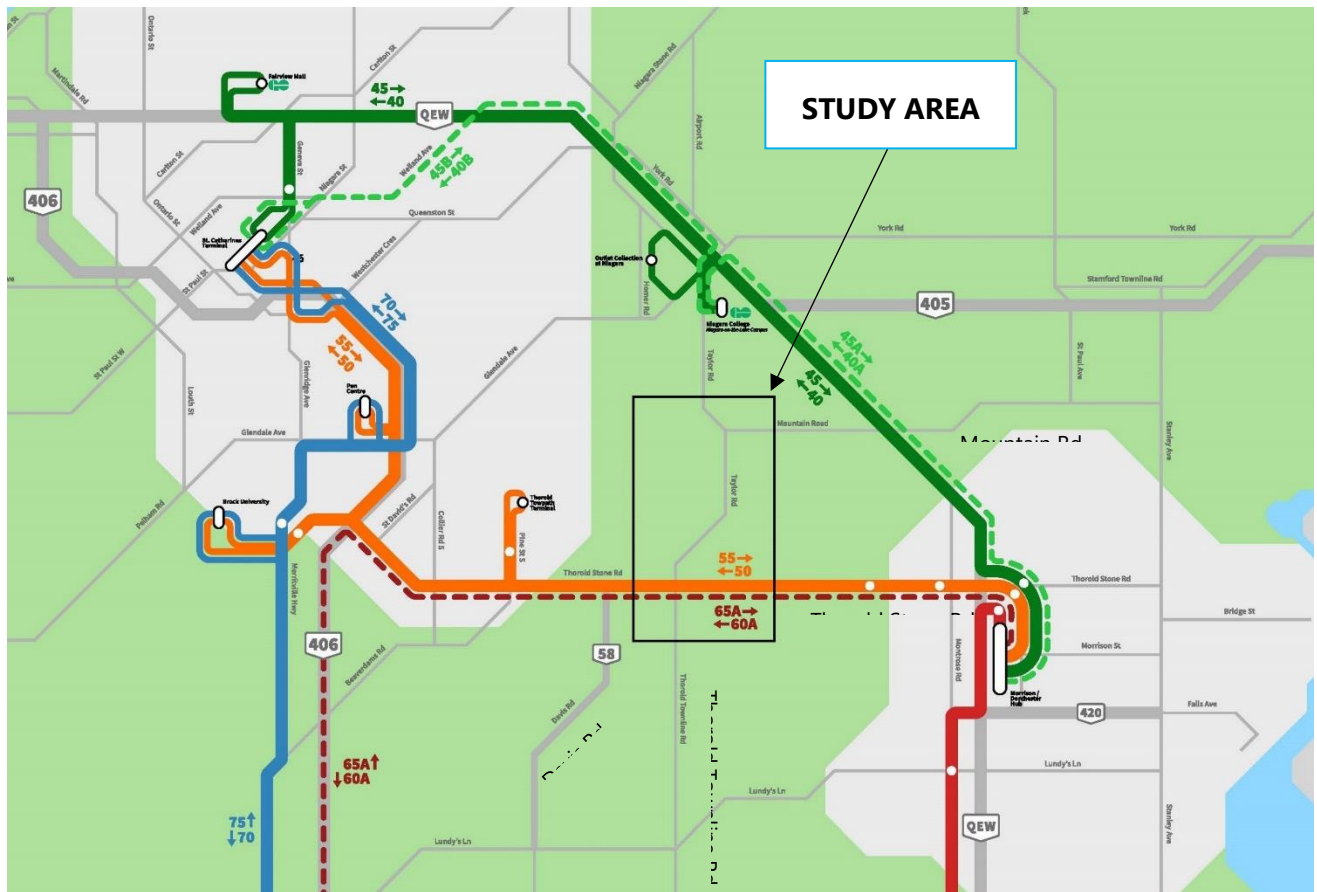
Source: City of Thorold, website: <https://www.thorold.ca/en/resources/map-greater-niagara-circle-route.pdf>

4.3 TRANSIT

Public transit in Niagara Region is currently operated by the Niagara Transit Commission under the name Niagara Region Transit (NRT) as shown in **Figure 4-3**. NRT routes 50 (Niagara Falls to St. Catharines), 55 (St. Catharines to Niagara Falls), 60A (Niagara Falls to Niagara College – Express), and 65A (Niagara College to Niagara Falls – Express) run along Thorold Stone Road but do not have transit stop locations near the study area. The closest transit stops for NRT routes 50 and 55 are at Thorold Towpath Terminal and at the intersection of Thorold Stone Road & Kalar Road.

While not directly accessible by connecting transit routes, the nearest GO Rail Transit Stops are located in the City of St. Catharines and in the City of Niagara Falls, serviced by the Lakeshore West Line. There are no fixed-route transit stops in close vicinity of the site, and NRT On-Demand service does not currently operate nearby.

Figure 4-3 Niagara Region Transit in the Vicinity of Study Area



4.4 HEAVY VEHICLES MOVEMENT

Most heavy vehicles accessing/leaving the study area are currently travelling along Taylor Road after making turns from Thorold Stone Road and Mountain Road. **Table 4-1** and **Table 4-2** indicate the percentage of heavy vehicle volume at study intersections as observed through the existing conditions traffic data collection.

Table 4-1 Heavy Vehicles Percentage at Study Intersections during AM Peak Hour

Movements – AM Peak Hour												
Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
Taylor Road & Thorold Stone Road	4	8	7	20	10	10	11	2	8	0	2	0
Taylor Road & East Access	91	6	0	0	5	42	89	0	96	0	0	0
Taylor Road & Mountain Road	0	8	9	5	10	0	0	0	0	4	0	4
Taylor Road & Primary Quarry Access	23	6	0	0	9	8	50	0	25	0	0	0
Taylor Road & Thorold Townline Road	2	12	0	0	13	3	9	0	12	0	0	0
Mountain Road & Garner Road	0	0	4	0	0	0	0	8	0	0	4	0
Thorold Stone Road & Beechwood Road	0	10	25	0	0	0	0	3	0	25	2	0
Taylor Road & Beechwood Road	0	9	0	0	12	0	0	0	0	100	0	95
Thorold Townline	20	0	0	0	13	13	7	0	21	0	0	0

Road & Old Thorold Stone Road													
Thorold Townline Road & North West Access Road	17	0	14	0	0	100	100	60	0	10	14	0	
Mountain Road & Maintenance Quarry Access	0	0	0	0	0	0	0	8	0	0	4	0	
Thorold Townline Road & Thorold Public Works Access/Landfill West Access	0	6	0	0	9	0	0	0	13	0	0	0	

As detailed in the table above, traffic data confirms that a majority of the vehicles utilizing the Walker East Access are observed to be heavy vehicles, while a lower proportion of heavy vehicles are observed at the Primary Quarry Access.

Table 4-2 Heavy Vehicles Percentage at Study Intersections during PM Peak Hour

Intersection	Movements - PM Peak Hour											
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
Taylor Road & Thorold Stone Road	7	5	0	0	3	4	6	1	8	0	1	12
Taylor Road & East Access	86	4	0	0	3	100	60	0	75	0	0	0
Taylor Road & Mountain Road	0	4	8	2	3	0	0	0	0	2	0	3
Taylor Road & Primary Quarry Access	33	4	0	0	2	25	18	0	23	0	0	0
Taylor Road & Thorold Townline Road	16	5	0	0	4	27	0	0	0	0	0	0
Mountain Road & Garner Road	8	0	0	50	0	0	0	5	0	0	2	0
Thorold Stone Road & Beechwood Road	0	0	0	0	0	0	0	1	0	0	1	6
Taylor Road & Beechwood Road	0	5	0	0	5	0	0	0	0	0	0	3
Thorold Townline Road & Old Thorold Stone Road	17	23	0	0	0	0	0	0	0	0	0	0
Thorold Townline Road & North West Access Road	20	0	43	0	0	0	0	67	0	0	0	0

Mountain Road & Maintenance Quarry Access	100	0	100	0	0	0	0	5	100	100	2	0
Thorold Townline Road & Thorold Public Works Access/Landfill West Access	0	21	0	0	0	0	0	0	0	0	0	0

A similar trend is also observed during the PM peak hour with a majority of the vehicles utilizing the Walker East Access being heavy vehicles and a lower proportion of heavy vehicles observed at the Primary Quarry Access.

Refer to **Appendix A** for a detailed split of existing heavy vehicle volumes that are bound for or leaving the Landfill and Quarry locations.

4.5 EXISTING RAIL FACILITIES

To the north of the site, a Canadian National Railway (CNR) line runs generally east-west, with a grade-separated crossing at Taylor Road, located approximately 125 meters north of the North Access. It is important to note that the rail facilities are not expected to be impacted by the proposed landfill expansion and will not be further analyzed in the transportation impact assessment.

4.6 COLLISION SUMMARY

Collision history data was obtained from the Niagara Region to assess the safety of roadways in the study area. From January 1, 2020, to January 1, 2025, a total of 75 collisions occurred in the transportation study area.

Table 4-3 provides a summary of the locations of these crashes. **Figure 4-4** illustrates the crash hotspots. It should be noted that 12 additional collisions were recorded along Thorold Stone Road; however, they were not illustrated due to the unclear location data in the crash records. From the data, the most critical roadways from a safety point of view are Thorold Stone Road and Taylor Road.

The highest number of crashes occurred at the intersection of Thorold Stone Road at Taylor Road. A majority of these 28 collisions were of the turning movement, rear-end, and sideswipe types. Contributing factors may include road curvature on the Taylor Road approach, inadequate speed limit signage, lack of proper turn phasing in traffic signals and poor pavement conditions.

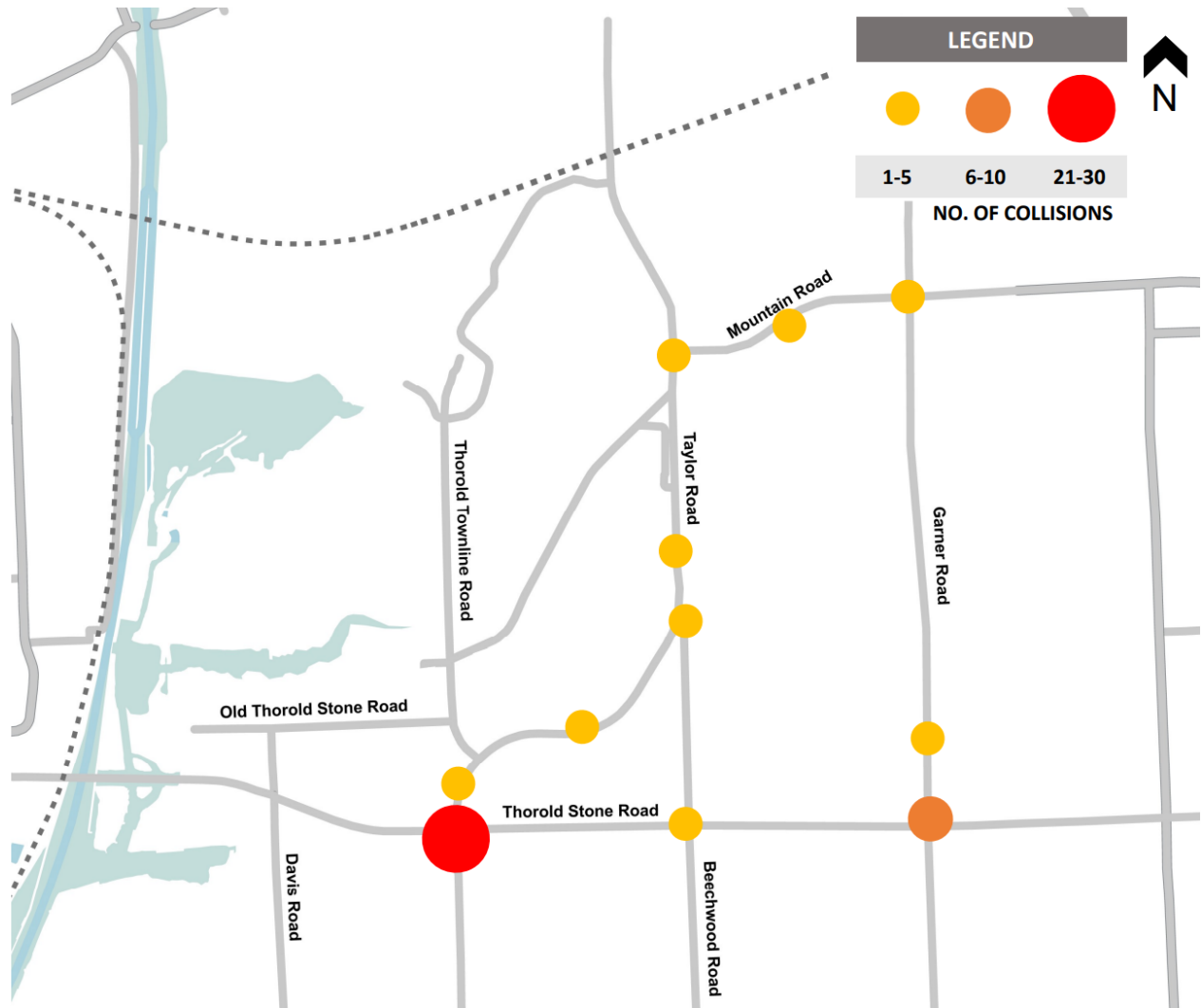
The second-highest number of crashes occurred at the intersection of Garner Road at Thorold Stone Road. A majority of these 10 collisions were of the Slow-Moving Vehicles (SMVs), angle and rear-end types. Many heavy vehicles go at a slower speed than automobiles and this speed variance in the traffic could be a contributing factor for the SMV impact crashes. Other contributing factors may

include inadequate speed limit signage, lack of proper turn phasing in traffic signals, presence of driveways near the intersection and poor pavement conditions.

Table 4-3 *Summary of Collision History*

Location	Number of Collisions
Beechwood Road at Taylor Road	1
Beechwood Road at Thorold Stone Road	5
Garner Road at Mountain Road	1
Garner Road at Thorold Stone Road	10
Garner Road between Reta Street & Swart Street	2
Mountain Road at Taylor Road	4
Mountain Road between Garner Road & Taylor Road	4
Taylor Road between Beechwood Road & Thorold Townline Road	1
Taylor Road between Mountain Road & Beechwood Road	2
Taylor Road between Thorold Townline Road & Highway 58 & Thorold Stone Road & Thorold Townline Road	5
Thorold Stone Road (exact location unavailable)	12
Thorold Stone Road at Taylor Road	28

Figure 4-4 Study Area Collision History



4.7 TRAFFIC CONDITIONS

4.7.1 Study Intersections

As per the methodology described in Section 3, the traffic analysis was conducted for the intersections summarized in **Table 4-4**. Traffic movement counts (TMCs) for each study intersection were collected on January 15, 2025, during weekday AM and PM peak periods. These TMCs are attached in **Appendix B**.

Table 4-4 List of Modelled and Analysed Intersections within Traffic Model

Intersection Name	Intersection Type	Date Counted
Taylor Road (Regional Road 70) and Thorold Stone Road (Regional Road 57)	Signalized	January 15, 2025
Taylor Road (Regional Road 70) and Walker Landfill East Access	Signalized	January 15, 2025
Taylor Road (Regional Road 70) and Mountain Road (Regional Road 101)	Signalized	January 15, 2025
Taylor Road (Regional Road 70) and Primary Quarry Access	Stop-controlled	January 15, 2025
Taylor Road (Regional Road 70) and Thorold Townline Road	Stop-controlled	January 15, 2025
Garner Road and Mountain Road (Regional Road 101)	Stop-controlled	January 15, 2025
Beechwood Road and Thorold Stone Road (Regional Road 57)	Stop-controlled	January 15, 2025
Beechwood Road and Taylor Road (Regional Road 70)	Stop-controlled	January 15, 2025
Old Thorold Stone Road and Thorold Townline Road	Stop-controlled	January 15, 2025
Thorold Townline Road and Landfill Northwest Access	Stop-controlled	January 15, 2025
Mountain Road (Regional Road 101) and Quarry Access (maintenance only)	Yield (assumed)	January 15, 2025
Thorold Townline Road Access and Thorold Public Works Access	Stop-controlled	January 15, 2025

4.7.2 Existing Conditions Traffic Analysis

The following table (**Table 4-5**) summarizes the Synchro/HCM traffic results for the study intersections during the weekday A.M. and P.M. peak hours under Existing (January 2025) traffic conditions. These traffic volumes are displayed in **Figure 4-5** and **Figure 4-6**. Detailed Synchro reports are attached in **Appendix A**.

Table 4-5 Existing Conditions Traffic Analysis – Year 2025

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
Taylor Road & Thorold Stone Road (Signalized)	Overall	0.55	18	B	0.64	19	B
	EBL	0.53	8	A	0.55	11	B
	EBT	0.28	5	A	0.48	11	B
	EBR	0.03	4	A	0.04	7	A
	WBL	0.07	16	B	0.16	16	B
	WBT	0.56	21	C	0.51	19	B
	WBR	0.03	15	B	0.02	14	B
	NBL	0.37	38	D	0.68	48	D
	NBTR	0.57	39	D	0.20	28	C
	SBL	0.24	36	D	0.16	28	C
	SBTR	0.54	39	D	0.79	42	D
Taylor Road & East Access (Signalized)	Overall	0.31	6	A	0.36	5	A
	EBL	0.12	20	C	0.20	23	C
	EBR	0.03	19	B	0.01	21	C
	NBL	0.08	4	A	0.02	3	A
	NBT	0.34	5	A	0.27	4	A
	SBT	0.30	5	A	0.37	4	A
	SBR	0.01	4	A	0.00	3	A
Taylor Road &	Overall	0.42	19	B	0.35	13	B

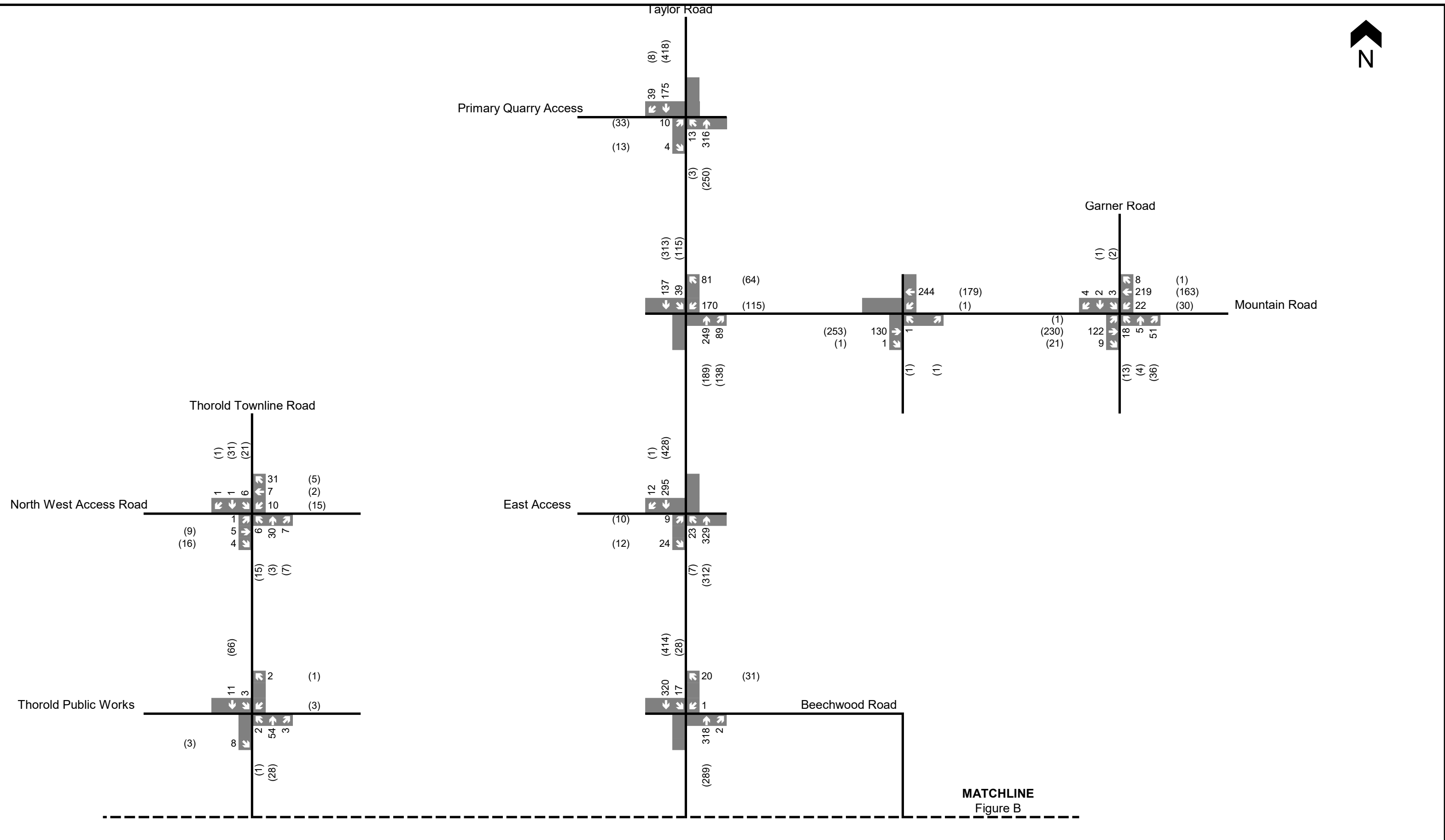
Mountain Road (Signalized)	WBL	0.69	42	D	0.52	38	D
	WBR	0.06	32	C	0.04	34	C
	NBTR	0.37	11	B	0.32	10	B
	SBL	0.07	5	A	0.16	4	A
	SBT	0.13	5	A	0.25	5	A
Taylor Road & Primary Quarry Access (Stop-controlled)	EBL	0.00	0	A	0.00	0	A
	EBR	0.00	9	A	0.02	11	B
	NBL	0.01	8	A	0.00	9	A
	NBT	0.20	0	A	0.16	0	A
	SBTR	0.14	0	A	0.27	0	A
Taylor Road & Thorold Townline Road (Stop-controlled)	EBL	0.04	18	C	0.10	13	B
	EBR	0.00	0	A	0.00	0	A
	NBL	0.04	8	A	0.03	9	A
	NBT	0.20	0	A	0.17	0	A
	SBTR	0.19	0	A	0.26	0	A
Mountain Road & Garner Road (Stop-controlled)	EBLTR	0.00	0	A	0.00	0	A
	WBLTR	0.02	1	A	0.02	1	A
	NBLTR	0.10	10	B	0.09	11	B
	SBLTR	0.02	11	B	0.01	14	B
Thorold Stone Road & Beechwood Road (Stop-controlled)	EBLT	0.30	0	A	0.43	0	A
	EBR	0.00	0	A	0.01	0	A
	WBTR	0.27	0	A	0.27	0	A
	NBLTR	0.24	46	<u>E</u>	0.39	95	<u>E</u>
	SBLTR	0.18	50	<u>E</u>	0.43	100	<u>E</u>
Taylor Road & Beechwood Road (Stop-controlled)	WBLR	0.04	11	B	0.05	10	B
	NBTR	0.21	0	A	0.18	0	A
	SBL	0.02	8	A	0.02	8	A

	SBT	0.21	0	A	0.26	0	A
Thorold Townline Road & Old Thorold Stone Road (Stop-controlled)	EBLR	0.07	9	A	0.04	9	A
	NBLT	0.02	3	A	0.01	2	A
	SBTR	0.02	0	A	0.06	0	A
Thorold Townline Road & North West Access Road (Stop-controlled)	EBLTR	0.02	8	A	0.04	7	A
	WBLTR	0.06	7	A	0.04	7	A
	NBLTR	0.06	7	A	0.04	7	A
	SBLTR	0.01	7	A	0.09	8	A
Mountain Road and Maintenance Quarry Access (Stop-controlled)	EBTR	0.09	0	A	0.16	0	A
	WBLT	0.00	0	A	0.00	0	A
	NBLR	0.00	11	B	0.00	12	A
Thorold Townline Road & Thorold Public Works Access/Landfill West Access (Stop-controlled)	EBLTR	0.10	9	A	0.00	9	A
	WBLTR	0.00	9	A	0.01	9	A
	NBLTR	0.00	0	A	0.00	0	A
	SBLTR	0.00	2	A	0.00	0	A

Under existing conditions, most study intersections operate efficiently, with traffic movements primarily functioning at LOS A-D. Along Thorold Townline Road, from Thorold Stone Road to the locations of Walker Industries Corporate Headquarters, all intersection movements are operating well at LOS A-C with minimal vehicular delays. Similarly, intersections along Taylor Road are also functioning with acceptable traffic operations.

Across the road network, the only critical operations are observed at the Thorold Stone Road & Beechwood Road intersection where the NBLTR and SBLTR movements experience high vehicular delays and are functioning at LOS E-F. While these movements are deemed critical under Niagara Region’s Transportation Impact Assessment Guidelines, only a small number of vehicles make these movements during peak hours. Additionally, heavy vehicles accessing or departing the Walker Landfill/Quarry generally avoid these movements, favouring Taylor Road, Thorold Townline Road, and Mountain Road instead. The majority of traffic traveling to and from the Walker Landfill/Quarry from the southwest primarily turns onto Taylor Road from Thorold Stone Road, where a traffic signal is present.

Figure 4-5 Existing Conditions Traffic Volumes (A)



Legend

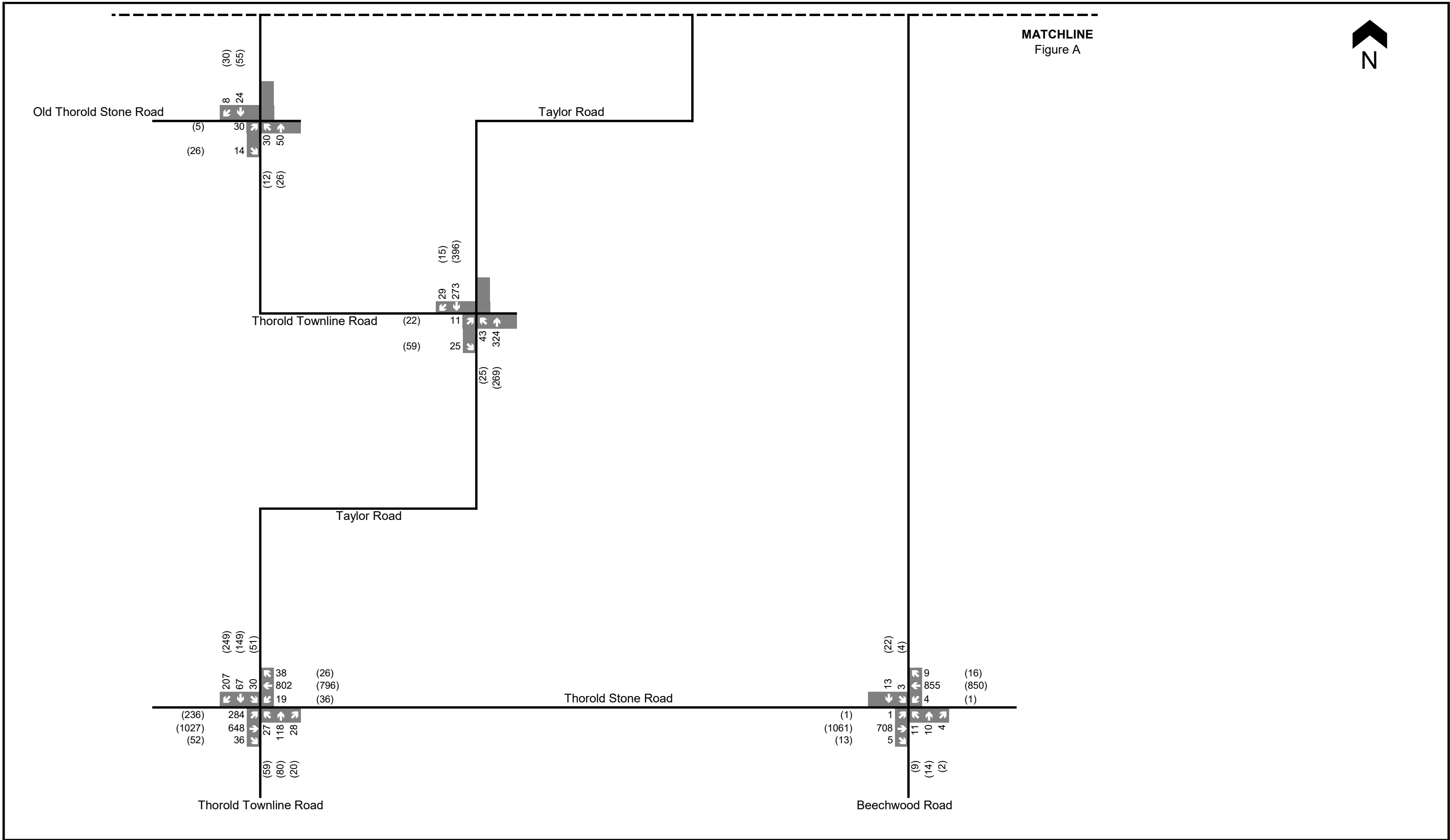
- xx A.M. Peak Hour Traffic
- (xx) P.M. Peak Hour Traffic

Existing Traffic Volumes

Figure (A)



Figure 4-6 Existing Conditions Traffic Volumes (B)



5 Conclusion

The enclosed existing conditions review of the study area's transportation network examined roadway, traffic, transit and active transportation facilities around the subject site. The study intersections are generally operating with acceptable traffic conditions and minimal vehicular delays. The only critical traffic movements occur at the Thorold Stone Road and Beechwood Road intersection in the north-south direction. However, this is not a significant concern, as only a small number of vehicles currently use this route, with most preferring alternative routes along Taylor Road and Mountain Road. The existing road network has sufficient capacity to accommodate an increase in vehicular traffic as a result of the proposed landfill expansion, and mitigation measures can be identified in subsequent phases of the study to alleviate isolated areas experiencing traffic congestion, higher volumes of collisions, or other network opportunities.

The multi-modal review indicates that pedestrian and cycling facilities are notably absent in the study area, creating a disconnected environment for active transportation users. Furthermore, the site currently lacks a transit stop, limiting accessibility for employees requiring non-auto access to the site. Although industrial areas may not traditionally be viewed as ideal locations for dedicated cycling, pedestrian, and transit infrastructure, it is noted that introducing these facilities can yield benefits for access to employment, congestion management, and the reduction in the severity of collisions. Additionally, such improvements can support nearby communities that may connect across the site's boundary roads and promote healthier lifestyles.

6 References

- Niagara Region’s Transportation Impact Assessment Guidelines (July 2023)
- City of Thorold’s Guidelines for Transportation Impact Studies (March 2018)
- Niagara Region Transportation Master Plan (October 2017)
- Thorold Transportation Master Plan (June 2020)
- 2022 Niagara Official Plan
- Niagara Region Open Data
- Walker Environmental Group Inc. South Landfill Environmental Screening Report (July 2013)

Appendix A – Traffic Movement Counts

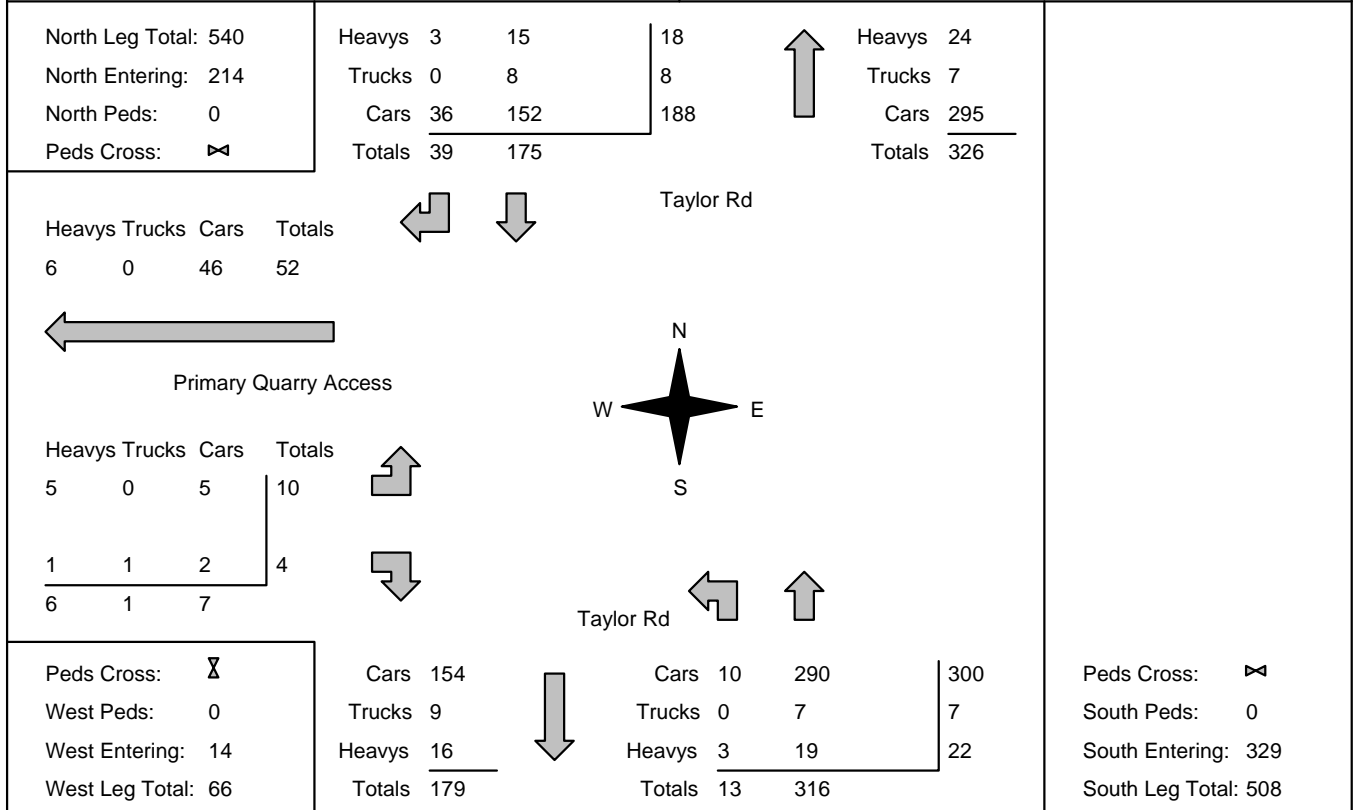
TMCs - Cars, Trucks, Heavy Vehicles

Accu-Traffic Inc.

Morning Peak Diagram	Specified Period From: 7:00:00 To: 9:00:00	One Hour Peak From: 7:45:00 To: 8:45:00
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Municipality: Thorold Site #: 2500400004 Intersection: Taylor Rd & Primary Quarry Access TFR File #: 1 Count date: 15-Jan-25	Weather conditions: Person counted: Person prepared: Person checked:
---	---

** Non-Signalized Intersection **	Major Road: Taylor Rd runs N/S
--	---------------------------------------



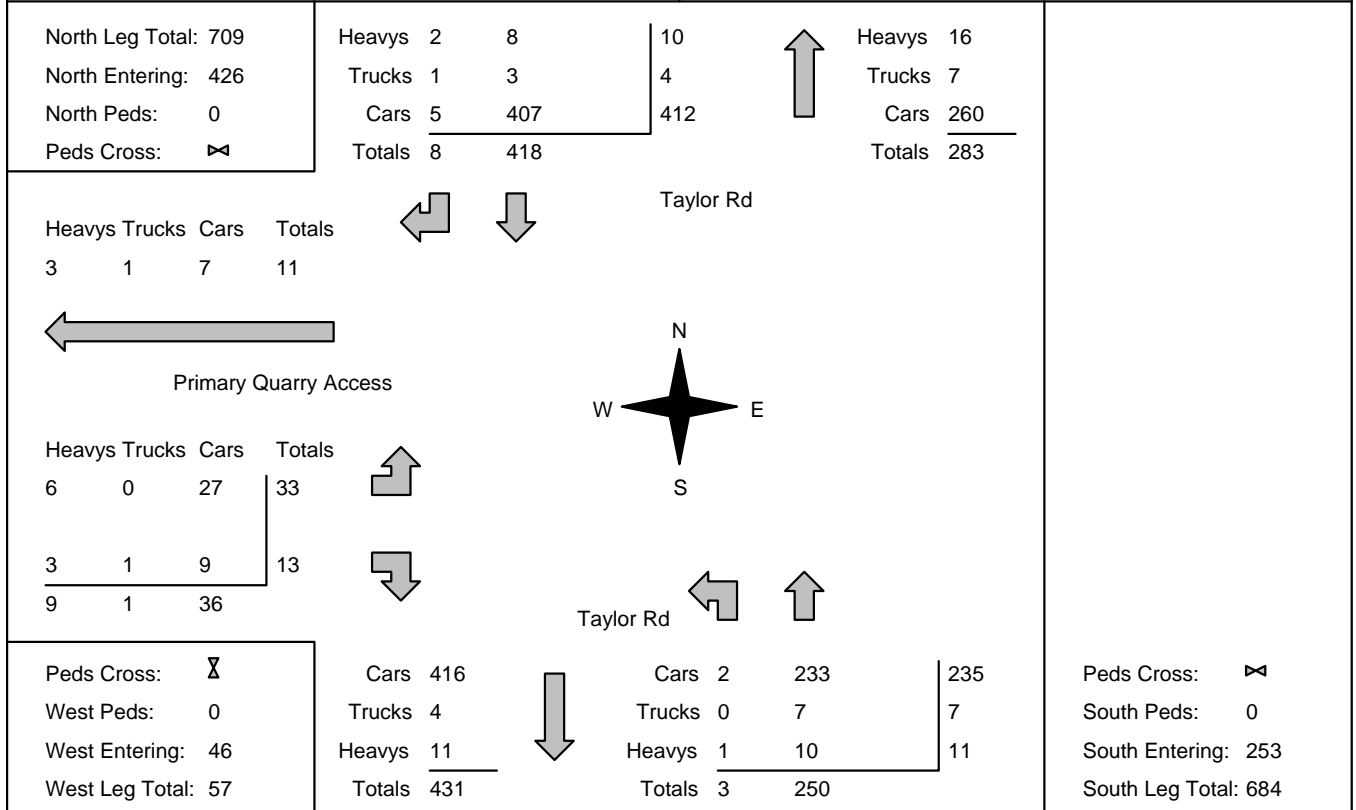
Comments

Accu-Traffic Inc.

Afternoon Peak Diagram	Specified Period From: 16:00:00 To: 18:00:00	One Hour Peak From: 16:00:00 To: 17:00:00
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Municipality: Thorold Site #: 2500400004 Intersection: Taylor Rd & Primary Quarry Access TFR File #: 1 Count date: 15-Jan-25	Weather conditions: Person counted: Person prepared: Person checked:
---	---

** Non-Signalized Intersection **	Major Road: Taylor Rd runs N/S
--	---------------------------------------



Comments

Accu-Traffic Inc.

Total Count Diagram

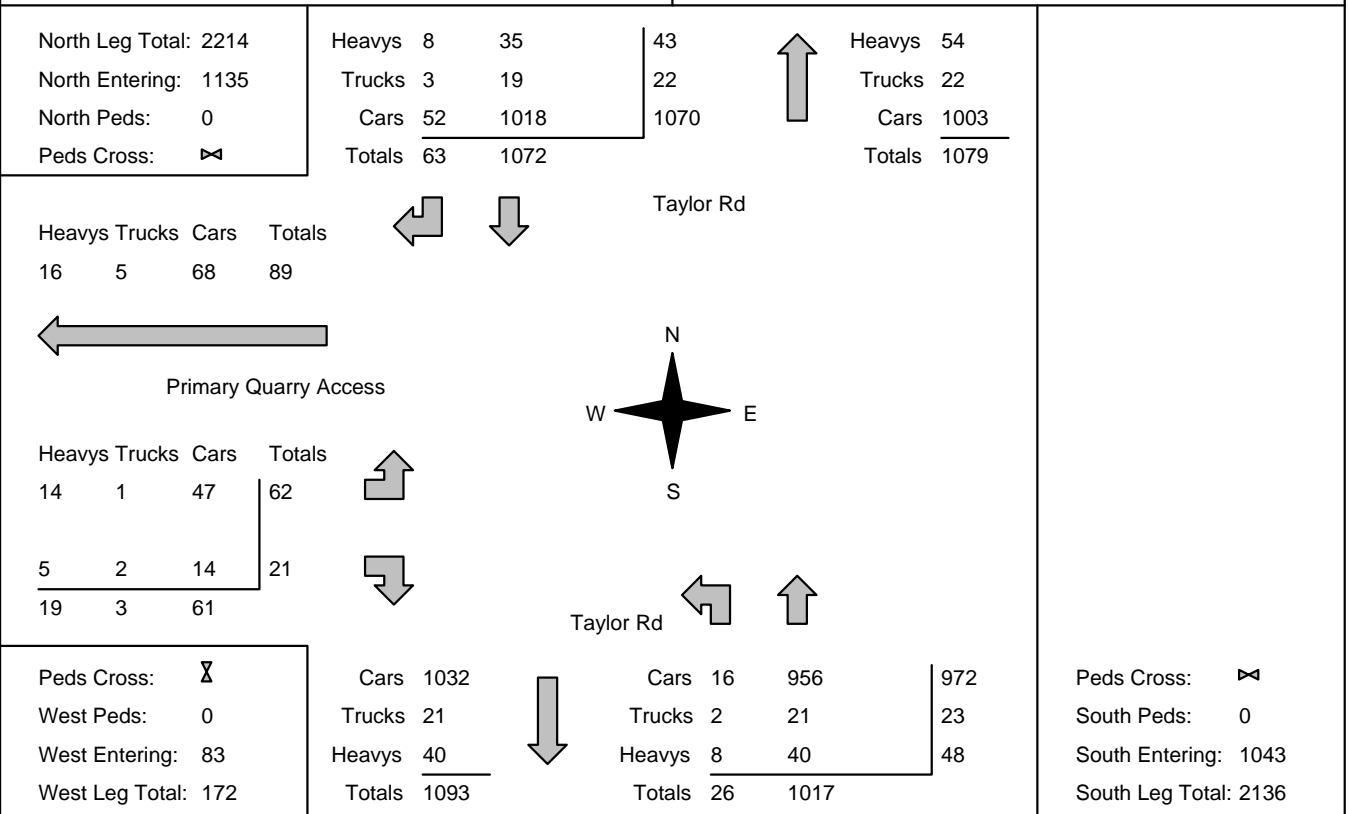
Municipality: Thorold
Site #: 2500400004
Intersection: Taylor Rd & Primary Quarry Access
TFR File #: 1
Count date: 15-Jan-25

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

Major Road: Taylor Rd runs N/S



Comments



Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Traffic Count Summary

Intersection: Taylor Rd & Primary Quarry Acces Count Date: 15-Jan-25 Municipality: Thorold

North Approach Totals						North/South Total Approaches	South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	0	113	24	137	0	392	8:00:00	13	242	0	255	0
9:00:00	0	189	30	219	0	531	9:00:00	9	303	0	312	0
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	0	418	8	426	0	679	17:00:00	3	250	0	253	0
18:00:00	0	352	1	353	0	576	18:00:00	1	222	0	223	0
Totals:	0	1072	63	1135	0	2178	S Totals:	26	1017	0	1043	0
East Approach Totals						East/West Total Approaches	West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	0	0	0	0	0	7	8:00:00	4	0	3	7	0
9:00:00	0	0	0	0	0	15	9:00:00	12	0	3	15	0
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	0	0	0	0	0	46	17:00:00	33	0	13	46	0
18:00:00	0	0	0	0	0	15	18:00:00	13	0	2	15	0
Totals:	0	0	0	0	0	83	W Totals:	62	0	21	83	0
Calculated Values for Traffic Crossing Major Street												
Hours Ending:	7:00	8:00	9:00	16:00			17:00	18:00	0:00	0:00		
Crossing Values:	0	4	12	0			33	13	0	0		

Accu-Traffic Inc.

Morning Peak Diagram	Specified Period From: 7:00:00 To: 9:00:00	One Hour Peak From: 7:45:00 To: 8:45:00
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Municipality: Thorold Site #: 2500400005 Intersection: Taylor Rd & Thorold Townline Rd TFR File #: 1 Count date: 15-Jan-25	Weather conditions: Person counted: Person prepared: Person checked:
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** Non-Signalized Intersection **	Major Road: Taylor Rd runs N/S
--	---------------------------------------

North Leg Total: 637 North Entering: 302 North Peds: 0 Peds Cross:	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Heavys</td> <td style="width: 15%;">1</td> <td style="width: 15%;">36</td> <td style="width: 15%; border-left: 1px solid black;">37</td> <td style="width: 15%;"></td> <td style="width: 15%;">Heavys</td> <td style="width: 15%;">39</td> </tr> <tr> <td>Trucks</td> <td>3</td> <td>4</td> <td style="border-left: 1px solid black;">7</td> <td></td> <td>Trucks</td> <td>8</td> </tr> <tr> <td>Cars</td> <td>25</td> <td>233</td> <td style="border-left: 1px solid black;">258</td> <td></td> <td>Cars</td> <td>288</td> </tr> <tr> <td>Totals</td> <td>29</td> <td>273</td> <td style="border-left: 1px solid black;"></td> <td></td> <td>Totals</td> <td>335</td> </tr> </table>	Heavys	1	36	37		Heavys	39	Trucks	3	4	7		Trucks	8	Cars	25	233	258		Cars	288	Totals	29	273			Totals	335																		
Heavys	1	36	37		Heavys	39																																									
Trucks	3	4	7		Trucks	8																																									
Cars	25	233	258		Cars	288																																									
Totals	29	273			Totals	335																																									
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%; text-align: center;">Taylor Rd</td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> <tr> <td style="text-align: center;"> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Heavys</td> <td style="width: 15%;">Trucks</td> <td style="width: 15%;">Cars</td> <td style="width: 15%; border-left: 1px solid black;">Totals</td> </tr> <tr> <td>2</td> <td>3</td> <td>67</td> <td style="border-left: 1px solid black;">72</td> </tr> </table> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> </tr> <tr> <td colspan="4" style="text-align: center;">Thorold Townline Rd</td> </tr> <tr> <td style="text-align: center;"> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Heavys</td> <td style="width: 15%;">Trucks</td> <td style="width: 15%;">Cars</td> <td style="width: 15%; border-left: 1px solid black;">Totals</td> </tr> <tr> <td>1</td> <td>3</td> <td>7</td> <td style="border-left: 1px solid black;">11</td> </tr> <tr> <td>3</td> <td>5</td> <td>17</td> <td style="border-left: 1px solid black;">25</td> </tr> <tr> <td>4</td> <td>8</td> <td>24</td> <td style="border-left: 1px solid black;"></td> </tr> </table> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> </tr> <tr> <td colspan="4" style="text-align: center;">Taylor Rd</td> </tr> </table>					Taylor Rd			<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Heavys</td> <td style="width: 15%;">Trucks</td> <td style="width: 15%;">Cars</td> <td style="width: 15%; border-left: 1px solid black;">Totals</td> </tr> <tr> <td>2</td> <td>3</td> <td>67</td> <td style="border-left: 1px solid black;">72</td> </tr> </table>	Heavys	Trucks	Cars	Totals	2	3	67	72	 			Thorold Townline Rd				<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Heavys</td> <td style="width: 15%;">Trucks</td> <td style="width: 15%;">Cars</td> <td style="width: 15%; border-left: 1px solid black;">Totals</td> </tr> <tr> <td>1</td> <td>3</td> <td>7</td> <td style="border-left: 1px solid black;">11</td> </tr> <tr> <td>3</td> <td>5</td> <td>17</td> <td style="border-left: 1px solid black;">25</td> </tr> <tr> <td>4</td> <td>8</td> <td>24</td> <td style="border-left: 1px solid black;"></td> </tr> </table>	Heavys	Trucks	Cars	Totals	1	3	7	11	3	5	17	25	4	8	24		 			Taylor Rd			
	Taylor Rd																																														
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Heavys</td> <td style="width: 15%;">Trucks</td> <td style="width: 15%;">Cars</td> <td style="width: 15%; border-left: 1px solid black;">Totals</td> </tr> <tr> <td>2</td> <td>3</td> <td>67</td> <td style="border-left: 1px solid black;">72</td> </tr> </table>	Heavys	Trucks	Cars	Totals	2	3	67	72	 																																						
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Heavys	Trucks	Cars	Totals																																												
1	3	7	11																																												
3	5	17	25																																												
4	8	24																																													
Taylor Rd																																															
Peds Cross: West Peds: 0 West Entering: 36 West Leg Total: 108	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Cars</td> <td style="width: 15%;">250</td> <td style="width: 15%;"></td> <td style="width: 15%; border-left: 1px solid black;">323</td> <td style="width: 15%;"></td> <td style="width: 15%;">Cars</td> <td style="width: 15%;">42</td> <td style="width: 15%;">281</td> </tr> <tr> <td>Trucks</td> <td>9</td> <td></td> <td style="border-left: 1px solid black;">5</td> <td></td> <td>Trucks</td> <td>0</td> <td>5</td> </tr> <tr> <td>Heavys</td> <td>39</td> <td></td> <td style="border-left: 1px solid black;">39</td> <td></td> <td>Heavys</td> <td>1</td> <td>38</td> </tr> <tr> <td>Totals</td> <td>298</td> <td></td> <td style="border-left: 1px solid black;"></td> <td></td> <td>Totals</td> <td>43</td> <td>324</td> </tr> </table>	Cars	250		323		Cars	42	281	Trucks	9		5		Trucks	0	5	Heavys	39		39		Heavys	1	38	Totals	298				Totals	43	324		Peds Cross: South Peds: 0 South Entering: 367 South Leg Total: 665												
Cars	250		323		Cars	42	281																																								
Trucks	9		5		Trucks	0	5																																								
Heavys	39		39		Heavys	1	38																																								
Totals	298				Totals	43	324																																								

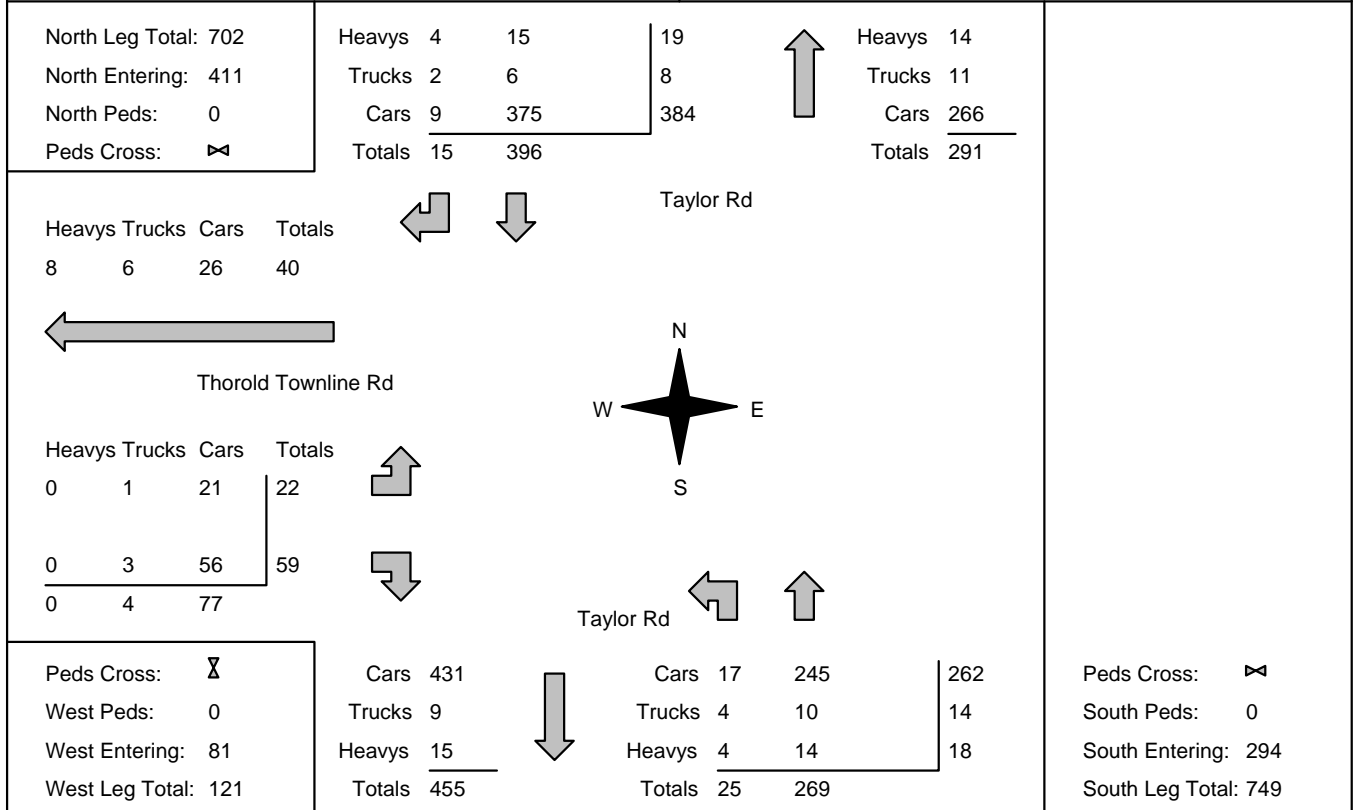
Comments

Accu-Traffic Inc.

Afternoon Peak Diagram	Specified Period From: 16:00:00 To: 18:00:00	One Hour Peak From: 16:00:00 To: 17:00:00
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Municipality: Thorold Site #: 2500400005 Intersection: Taylor Rd & Thorold Townline Rd TFR File #: 1 Count date: 15-Jan-25	Weather conditions: Person counted: Person prepared: Person checked:
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** Non-Signalized Intersection **	Major Road: Taylor Rd runs N/S
--	---------------------------------------



Comments

Accu-Traffic Inc.

Total Count Diagram

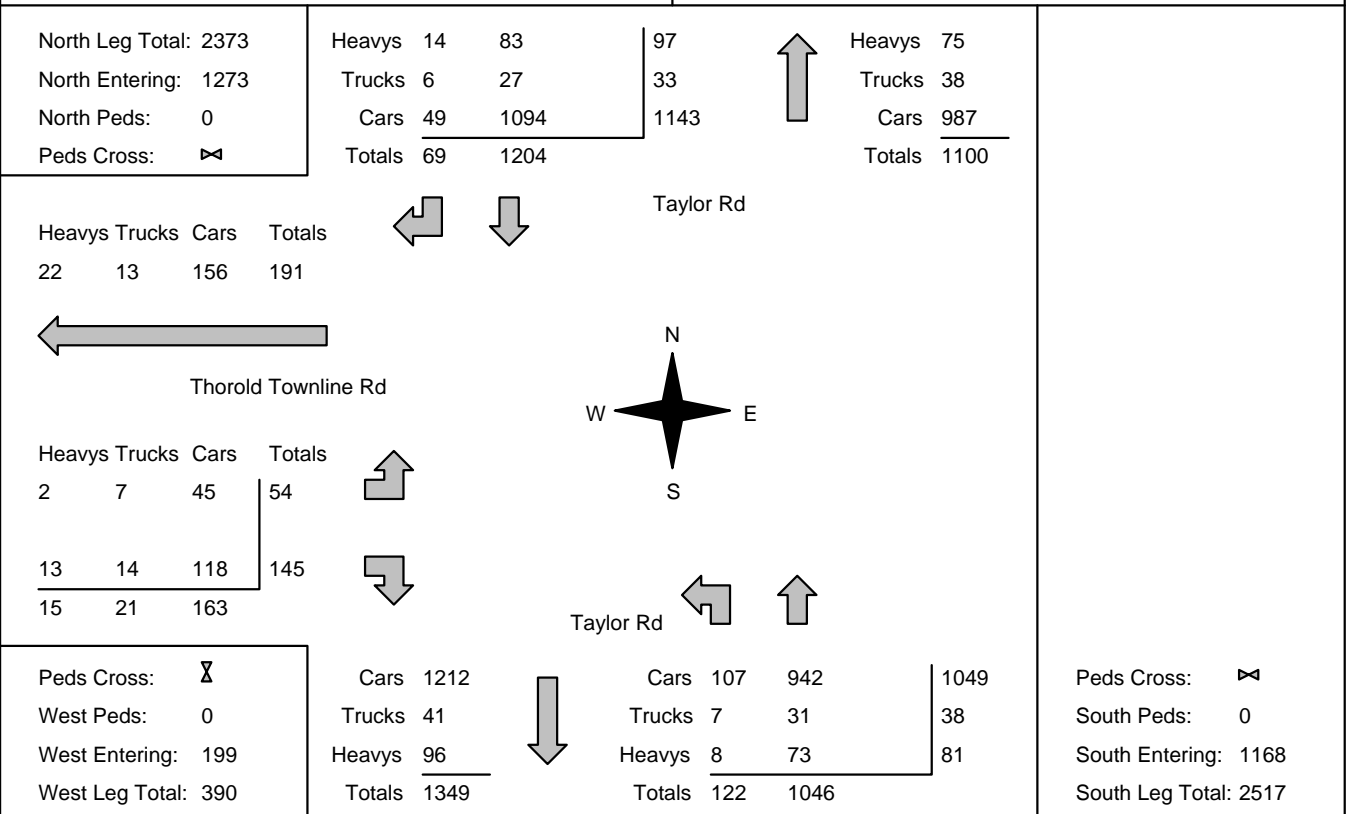
Municipality: Thorold
Site #: 2500400005
Intersection: Taylor Rd & Thorold Townline Rd
TFR File #: 1
Count date: 15-Jan-25

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

Major Road: Taylor Rd runs N/S



Comments



Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Traffic Count Summary

Intersection: Taylor Rd & Thorold Townline Rd Count Date: 15-Jan-25 Municipality: Thorold

North Approach Totals						North/South Total Approaches	South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	0	199	25	224	0	532	8:00:00	47	261	0	308	0
9:00:00	0	291	24	315	0	656	9:00:00	39	302	0	341	0
16:00:00	0	0	0	0	0	1	16:00:00	0	1	0	1	0
17:00:00	0	396	15	411	0	705	17:00:00	25	269	0	294	0
18:00:00	0	318	5	323	0	547	18:00:00	11	213	0	224	0
Totals:	0	1204	69	1273	0	2441	S Totals:	122	1046	0	1168	0
East Approach Totals						East/West Total Approaches	West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	0	0	0	0	0	41	8:00:00	7	0	34	41	0
9:00:00	0	0	0	0	0	38	9:00:00	13	0	25	38	0
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	0	0	0	0	0	81	17:00:00	22	0	59	81	0
18:00:00	0	0	0	0	0	39	18:00:00	12	0	27	39	0
Totals:	0	0	0	0	0	199	W Totals:	54	0	145	199	0
Calculated Values for Traffic Crossing Major Street												
Hours Ending:	7:00	8:00	9:00	16:00			17:00	18:00	0:00	0:00		
Crossing Values:	0	7	13	0			22	12	0	0		



Accu-Traffic Inc.

Count Date: 15-Jan-25 Site #: 2500400005

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Heavys - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	6	6	31	31	0	0	0	0	4	4	0	0	0	0	4	4	0	0	0	0
7:30:00	14	8	77	46	0	0	0	0	5	1	0	0	0	0	10	6	0	0	0	0
7:45:00	30	16	138	61	0	0	2	2	7	2	0	0	1	1	17	7	0	0	0	0
8:00:00	44	14	224	86	0	0	2	0	8	1	0	0	1	0	29	12	0	0	0	0
8:15:00	54	10	279	55	0	0	2	0	9	1	0	0	2	1	39	10	0	0	0	0
8:30:00	63	9	346	67	0	0	2	0	10	1	0	0	2	0	46	7	0	0	0	0
8:45:00	72	9	419	73	0	0	2	0	12	2	0	0	2	0	55	9	0	0	0	0
9:00:00	82	10	491	72	0	0	2	0	16	4	0	0	2	0	56	1	0	0	0	0
9:15:00	82	0	491	0	0	0	2	0	17	1	0	0	2	0	56	0	0	0	0	0
16:00:00	82	0	491	0	0	0	2	0	17	0	0	0	2	0	56	0	0	0	0	0
16:15:00	87	5	558	67	0	0	3	1	21	4	0	0	2	0	62	6	0	0	0	0
16:30:00	93	6	611	53	0	0	4	1	25	4	0	0	3	1	65	3	0	0	0	0
16:45:00	97	4	669	58	0	0	4	0	26	1	0	0	4	1	69	4	0	0	0	0
17:00:00	99	2	736	67	0	0	6	2	27	1	0	0	6	2	70	1	0	0	0	0
17:15:00	100	1	792	56	0	0	6	0	28	1	0	0	7	1	70	0	0	0	0	0
17:30:00	102	2	847	55	0	0	7	1	29	1	0	0	7	0	71	1	0	0	0	0
17:45:00	106	4	889	42	0	0	7	0	30	1	0	0	7	0	72	1	0	0	0	0
18:00:00	107	1	942	53	0	0	7	0	31	1	0	0	8	1	73	1	0	0	0	0
18:15:00	107	0	942	0	0	0	7	0	31	0	0	0	8	0	73	0	0	0	0	0
18:15:15	107	0	942	0	0	0	7	0	31	0	0	0	8	0	73	0	0	0	0	0

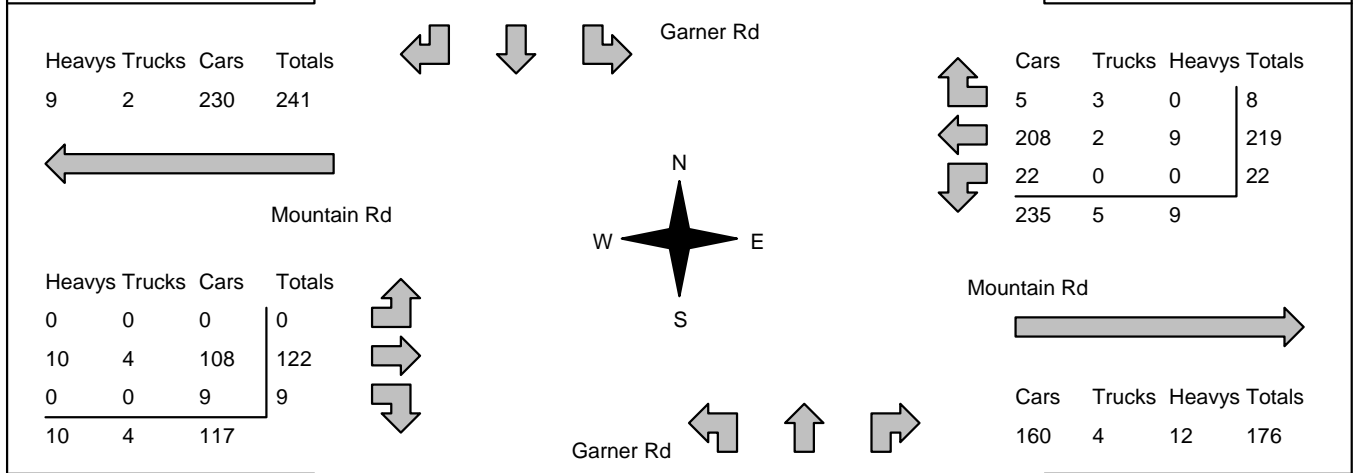
Accu-Traffic Inc.

Morning Peak Diagram	Specified Period From: 7:00:00 To: 9:00:00	One Hour Peak From: 7:45:00 To: 8:45:00
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Municipality: Thorold Site #: 2500400006 Intersection: Mountain Rd & Garner Rd TFR File #: 1 Count date: 15-Jan-25	Weather conditions: Person counted: Person prepared: Person checked:
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** Non-Signalized Intersection **	Major Road: Mountain Rd runs W/E
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North Leg Total: 22 North Entering: 9 North Peds: 0 Peds Cross: ☒	<table style="margin: auto;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Cars</td><td>4</td><td>2</td><td>3</td><td>9</td></tr> <tr><td>Totals</td><td>4</td><td>2</td><td>3</td><td></td></tr> </table>	Heavys	0	0	0	0	Trucks	0	0	0	0	Cars	4	2	3	9	Totals	4	2	3		<table style="margin: auto;"> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Trucks</td><td>3</td></tr> <tr><td>Cars</td><td>10</td></tr> <tr><td>Totals</td><td>13</td></tr> </table>	Heavys	0	Trucks	3	Cars	10	Totals	13	East Leg Total: 425 East Entering: 249 East Peds: 0 Peds Cross: ☒
Heavys	0	0	0	0																											
Trucks	0	0	0	0																											
Cars	4	2	3	9																											
Totals	4	2	3																												
Heavys	0																														
Trucks	3																														
Cars	10																														
Totals	13																														



Peds Cross: ☒ West Peds: 0 West Entering: 131 West Leg Total: 372	<table style="margin: auto;"> <tr><td>Cars</td><td>33</td></tr> <tr><td>Trucks</td><td>0</td></tr> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Totals</td><td>33</td></tr> </table>	Cars	33	Trucks	0	Heavys	0	Totals	33	<table style="margin: auto;"> <tr><td>Cars</td><td>18</td><td>5</td><td>49</td><td>72</td></tr> <tr><td>Trucks</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Heavys</td><td>0</td><td>0</td><td>2</td><td>2</td></tr> <tr><td>Totals</td><td>18</td><td>5</td><td>51</td><td></td></tr> </table>	Cars	18	5	49	72	Trucks	0	0	0	0	Heavys	0	0	2	2	Totals	18	5	51		Peds Cross: ☒ South Peds: 0 South Entering: 74 South Leg Total: 107
Cars	33																														
Trucks	0																														
Heavys	0																														
Totals	33																														
Cars	18	5	49	72																											
Trucks	0	0	0	0																											
Heavys	0	0	2	2																											
Totals	18	5	51																												

Comments

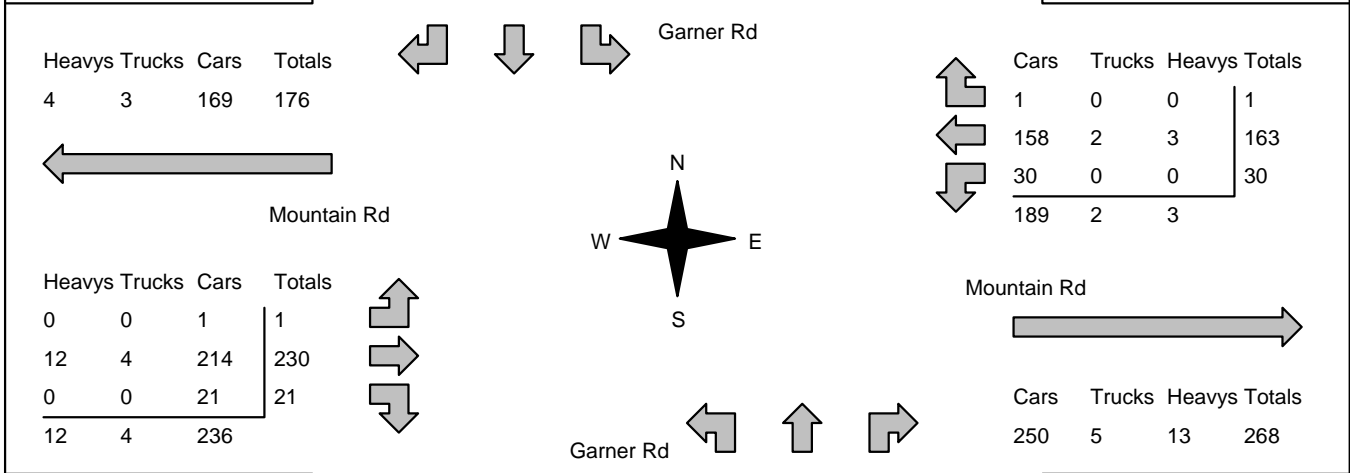
Accu-Traffic Inc.

Afternoon Peak Diagram	Specified Period From: 16:00:00 To: 18:00:00	One Hour Peak From: 16:00:00 To: 17:00:00
-------------------------------	---	--

Municipality: Thorold Site #: 2500400006 Intersection: Mountain Rd & Garner Rd TFR File #: 1 Count date: 15-Jan-25	Weather conditions: Person counted: Person prepared: Person checked:
---	---

** Non-Signalized Intersection **	Major Road: Mountain Rd runs W/E
--	---

North Leg Total: 9 North Entering: 3 North Peds: 0 Peds Cross: ☒	<table style="margin: auto;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>1</td><td>1</td></tr> <tr><td>Trucks</td><td>0</td><td>0</td><td>1</td><td>1</td></tr> <tr><td>Cars</td><td>0</td><td>1</td><td>0</td><td>1</td></tr> <tr style="border-top: 1px solid black;"><td>Totals</td><td>0</td><td>1</td><td>2</td><td></td></tr> </table>	Heavys	0	0	1	1	Trucks	0	0	1	1	Cars	0	1	0	1	Totals	0	1	2		<table style="margin: auto;"> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Trucks</td><td>0</td></tr> <tr><td>Cars</td><td>6</td></tr> <tr style="border-top: 1px solid black;"><td>Totals</td><td>6</td></tr> </table>	Heavys	0	Trucks	0	Cars	6	Totals	6	East Leg Total: 462 East Entering: 194 East Peds: 0 Peds Cross: ☒
Heavys	0	0	1	1																											
Trucks	0	0	1	1																											
Cars	0	1	0	1																											
Totals	0	1	2																												
Heavys	0																														
Trucks	0																														
Cars	6																														
Totals	6																														



Peds Cross: ☒ West Peds: 0 West Entering: 252 West Leg Total: 428		Peds Cross: ☒ South Peds: 0 South Entering: 53 South Leg Total: 105
--	--	--

Comments

Accu-Traffic Inc.

Total Count Diagram

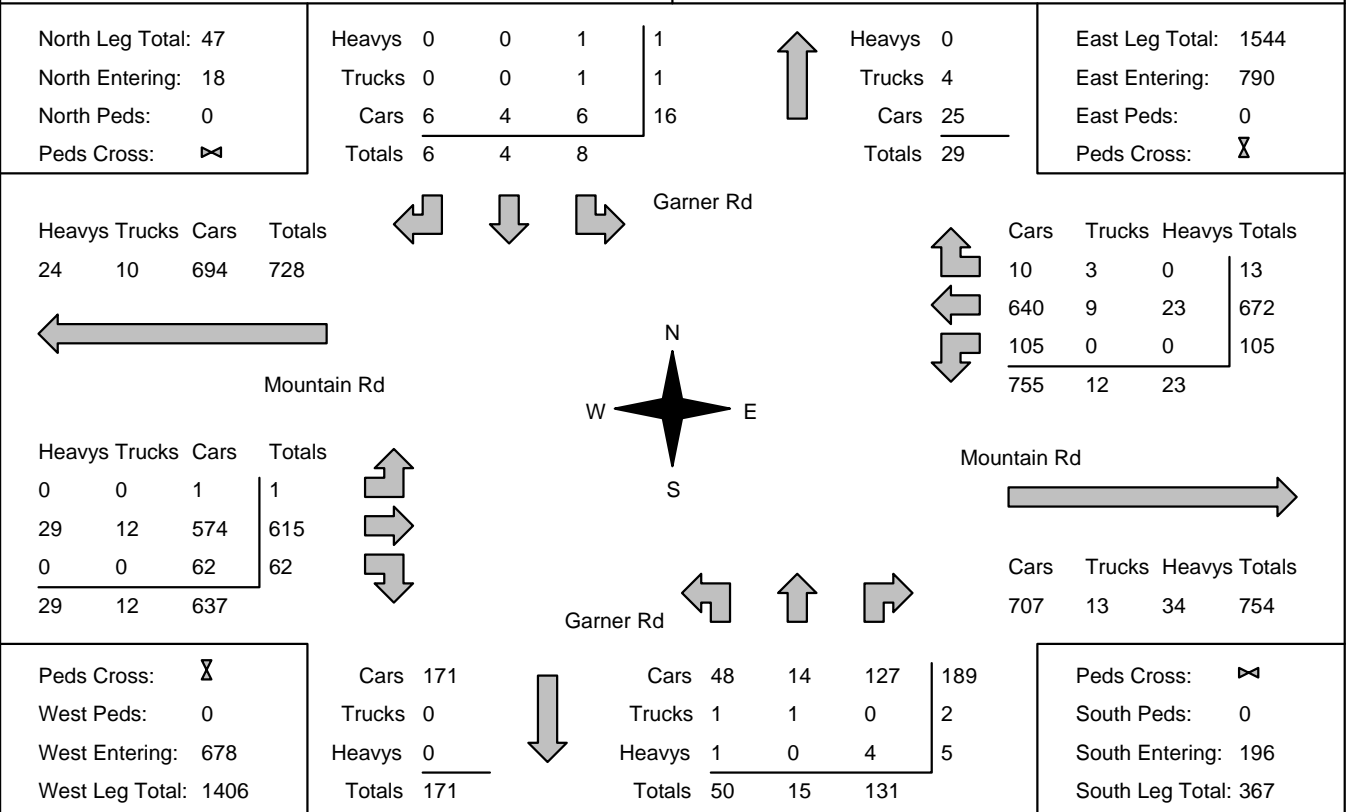
Municipality: Thorold
Site #: 2500400006
Intersection: Mountain Rd & Garner Rd
TFR File #: 1
Count date: 15-Jan-25

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

Major Road: Mountain Rd runs W/E



Comments



Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Traffic Count Summary

Intersection: Mountain Rd & Garner Rd Count Date: 15-Jan-25 Municipality: Thorold

North Approach Totals						North/South Total Approaches	South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	1	0	5	6	0	46	8:00:00	7	4	29	40	0
9:00:00	2	2	1	5	0	71	9:00:00	18	3	45	66	0
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	2	1	0	3	0	56	17:00:00	13	4	36	53	0
18:00:00	3	1	0	4	0	41	18:00:00	12	4	21	37	0
Totals:	8	4	6	18	0	214	S Totals:	50	15	131	196	0
East Approach Totals						East/West Total Approaches	West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	24	156	4	184	0	277	8:00:00	0	91	2	93	0
9:00:00	28	213	5	246	0	376	9:00:00	0	117	13	130	0
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	30	163	1	194	0	446	17:00:00	1	230	21	252	0
18:00:00	23	140	3	166	0	369	18:00:00	0	177	26	203	0
Totals:	105	672	13	790	0	1468	W Totals:	1	615	62	678	0
Calculated Values for Traffic Crossing Major Street												
Hours Ending:	7:00	8:00	9:00	16:00			17:00	18:00	0:00	0:00		
Crossing Values:	0	12	23	0			19	19	0	0		

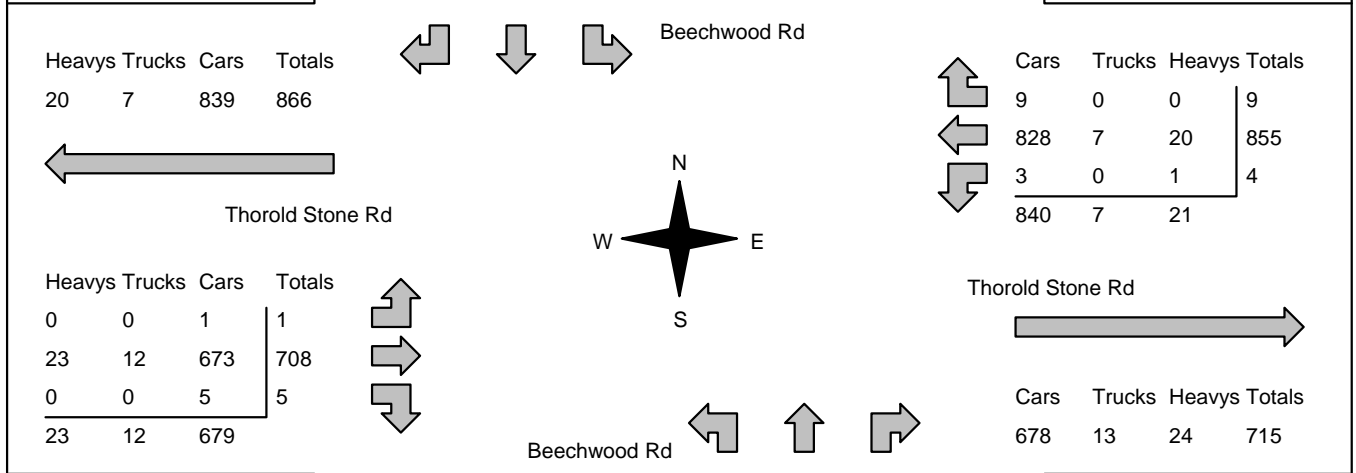
Accu-Traffic Inc.

Morning Peak Diagram	Specified Period From: 7:00:00 To: 9:00:00	One Hour Peak From: 8:00:00 To: 9:00:00
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Municipality: Thorold Site #: 2500400007 Intersection: Thorold Stone Rd & Beechwood Rd TFR File #: 1 Count date: 15-Jan-25	Weather conditions: Person counted: Person prepared: Person checked:
---	---

** Non-Signalized Intersection **	Major Road: Thorold Stone Rd runs W/E
--	--

North Leg Total: 36 North Entering: 16 North Peds: 0 Peds Cross: ☒	<table style="border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>0</td><td>2</td><td>1</td><td>3</td></tr> <tr><td>Cars</td><td>0</td><td>11</td><td>2</td><td>13</td></tr> <tr><td>Totals</td><td>0</td><td>13</td><td>3</td><td></td></tr> </table>	Heavys	0	0	0	0	Trucks	0	2	1	3	Cars	0	11	2	13	Totals	0	13	3		↑	<table style="border-collapse: collapse;"> <tr><td>Heavys</td><td>1</td></tr> <tr><td>Trucks</td><td>0</td></tr> <tr><td>Cars</td><td>19</td></tr> <tr><td>Totals</td><td>20</td></tr> </table>	Heavys	1	Trucks	0	Cars	19	Totals	20	East Leg Total: 1583 East Entering: 868 East Peds: 0 Peds Cross: ☒
Heavys	0	0	0	0																												
Trucks	0	2	1	3																												
Cars	0	11	2	13																												
Totals	0	13	3																													
Heavys	1																															
Trucks	0																															
Cars	19																															
Totals	20																															



Peds Cross: ☒ West Peds: 0 West Entering: 714 West Leg Total: 1580	<table style="border-collapse: collapse;"> <tr><td>Cars</td><td>19</td></tr> <tr><td>Trucks</td><td>2</td></tr> <tr><td>Heavys</td><td>1</td></tr> <tr><td>Totals</td><td>22</td></tr> </table>	Cars	19	Trucks	2	Heavys	1	Totals	22	↓	<table style="border-collapse: collapse;"> <tr><td>Cars</td><td>11</td><td>9</td><td>3</td><td>23</td></tr> <tr><td>Trucks</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Heavys</td><td>0</td><td>1</td><td>1</td><td>2</td></tr> <tr><td>Totals</td><td>11</td><td>10</td><td>4</td><td></td></tr> </table>	Cars	11	9	3	23	Trucks	0	0	0	0	Heavys	0	1	1	2	Totals	11	10	4		Peds Cross: ☒ South Peds: 0 South Entering: 25 South Leg Total: 47
Cars	19																															
Trucks	2																															
Heavys	1																															
Totals	22																															
Cars	11	9	3	23																												
Trucks	0	0	0	0																												
Heavys	0	1	1	2																												
Totals	11	10	4																													


Comments

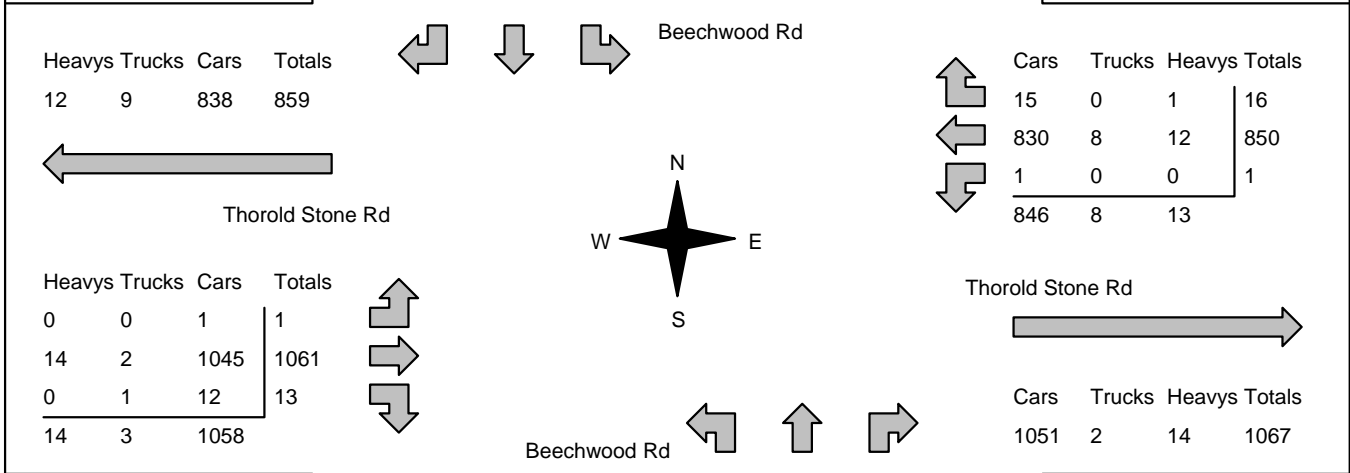
Accu-Traffic Inc.


Afternoon Peak Diagram	Specified Period From: 16:00:00 To: 18:00:00	One Hour Peak From: 16:00:00 To: 17:00:00
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Municipality: Thorold Site #: 2500400007 Intersection: Thorold Stone Rd & Beechwood Rd TFR File #: 1 Count date: 15-Jan-25	Weather conditions: Person counted: Person prepared: Person checked:
---	---

** Non-Signalized Intersection **	Major Road: Thorold Stone Rd runs W/E
--	--

North Leg Total: 57 North Entering: 26 North Peds: 0 Peds Cross: \boxtimes	<table style="border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>0</td><td>1</td><td>0</td><td>1</td></tr> <tr><td>Cars</td><td>0</td><td>21</td><td>4</td><td>25</td></tr> <tr style="border-top: 1px solid black;"><td>Totals</td><td>0</td><td>22</td><td>4</td><td></td></tr> </table>	Heavys	0	0	0	0	Trucks	0	1	0	1	Cars	0	21	4	25	Totals	0	22	4			<table style="border-collapse: collapse;"> <tr><td>Heavys</td><td>1</td></tr> <tr><td>Trucks</td><td>0</td></tr> <tr><td>Cars</td><td>30</td></tr> <tr style="border-top: 1px solid black;"><td>Totals</td><td>31</td></tr> </table>	Heavys	1	Trucks	0	Cars	30	Totals	31	East Leg Total: 1934 East Entering: 867 East Peds: 0 Peds Cross: \boxtimes
Heavys	0	0	0	0																												
Trucks	0	1	0	1																												
Cars	0	21	4	25																												
Totals	0	22	4																													
Heavys	1																															
Trucks	0																															
Cars	30																															
Totals	31																															



Peds Cross: \boxtimes West Peds: 0 West Entering: 1075 West Leg Total: 1934	<table style="border-collapse: collapse;"> <tr><td>Cars</td><td>34</td></tr> <tr><td>Trucks</td><td>2</td></tr> <tr><td>Heavys</td><td>0</td></tr> <tr style="border-top: 1px solid black;"><td>Totals</td><td>36</td></tr> </table>	Cars	34	Trucks	2	Heavys	0	Totals	36		<table style="border-collapse: collapse;"> <tr><td>Cars</td><td>8</td><td>14</td><td>2</td><td>24</td></tr> <tr><td>Trucks</td><td>1</td><td>0</td><td>0</td><td>1</td></tr> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr style="border-top: 1px solid black;"><td>Totals</td><td>9</td><td>14</td><td>2</td><td></td></tr> </table>	Cars	8	14	2	24	Trucks	1	0	0	1	Heavys	0	0	0	0	Totals	9	14	2		Peds Cross: \boxtimes South Peds: 0 South Entering: 25 South Leg Total: 61
Cars	34																															
Trucks	2																															
Heavys	0																															
Totals	36																															
Cars	8	14	2	24																												
Trucks	1	0	0	1																												
Heavys	0	0	0	0																												
Totals	9	14	2																													

Comments

Accu-Traffic Inc.

Total Count Diagram

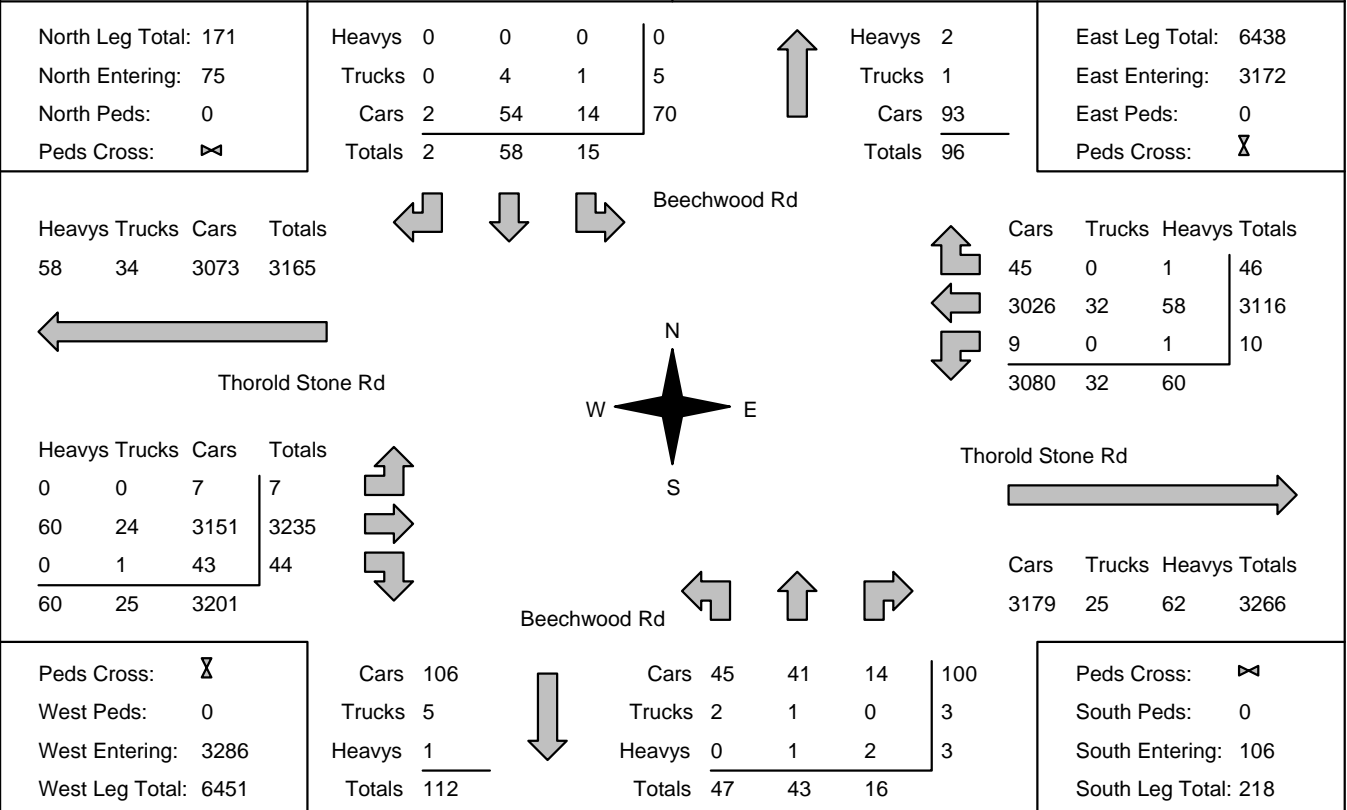
Municipality: Thorold
Site #: 2500400007
Intersection: Thorold Stone Rd & Beechwood Rd
TFR File #: 1
Count date: 15-Jan-25

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

Major Road: Thorold Stone Rd runs W/E



Comments



Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

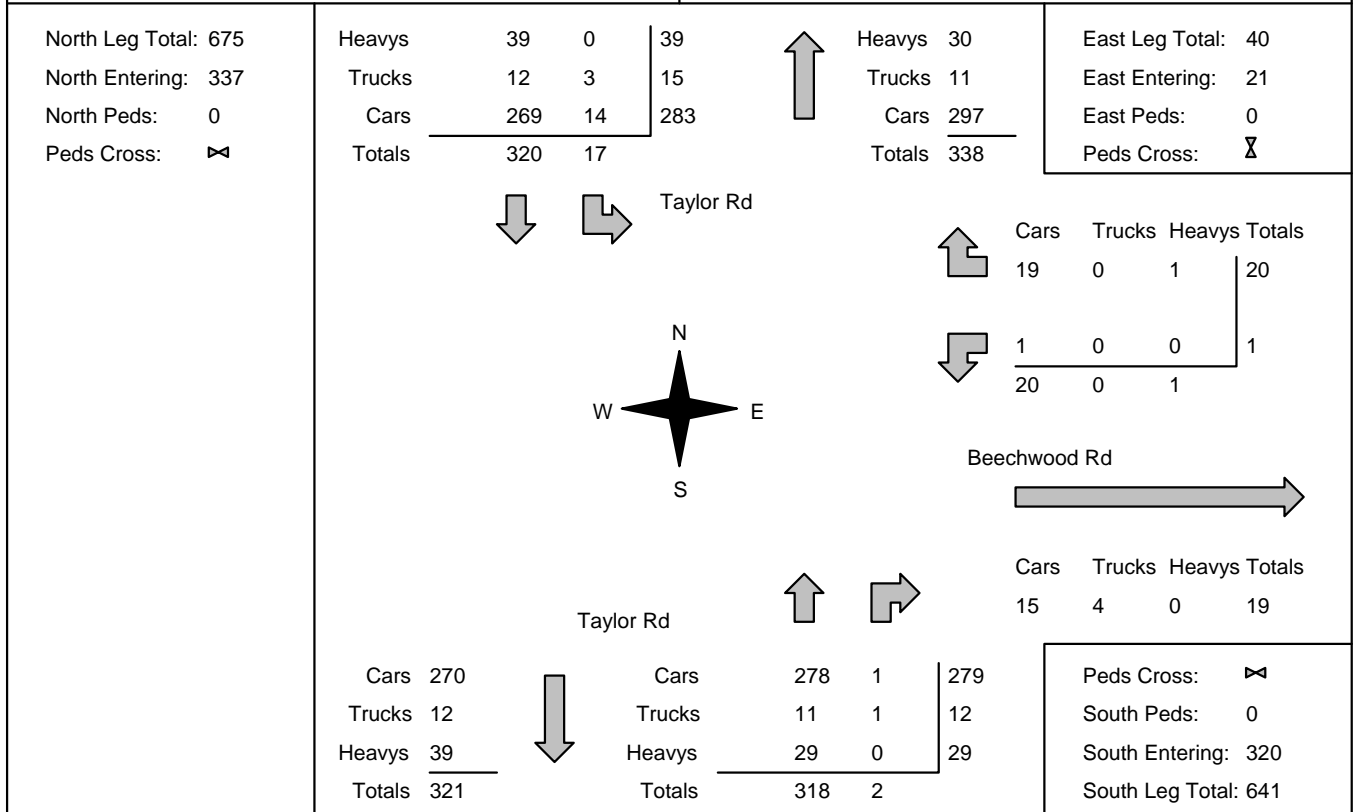
Traffic Count Summary

Intersection: Thorold Stone Rd & Beechwood R Count Date: 15-Jan-25 Municipality: Thorold

North Approach Totals						North/South Total Approaches	South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	1	5	0	6	0	31	8:00:00	12	8	5	25	0
9:00:00	3	13	0	16	0	41	9:00:00	11	10	4	25	0
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	4	22	0	26	0	51	17:00:00	9	14	2	25	0
18:00:00	7	18	2	27	0	58	18:00:00	15	11	5	31	0
Totals:	15	58	2	75	0	181	S Totals:	47	43	16	106	0
East Approach Totals						East/West Total Approaches	West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	1	639	10	650	0	1219	8:00:00	1	559	9	569	0
9:00:00	4	855	9	868	0	1582	9:00:00	1	708	5	714	0
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	1	850	16	867	0	1942	17:00:00	1	1061	13	1075	0
18:00:00	4	771	11	786	0	1714	18:00:00	4	907	17	928	0
Totals:	10	3115	46	3171	0	6457	W Totals:	7	3235	44	3286	0
Calculated Values for Traffic Crossing Major Street												
Hours Ending:	7:00	8:00	9:00	16:00			17:00	18:00	0:00	0:00		
Crossing Values:	0	21	27	0			35	40	0	0		

Accu-Traffic Inc.

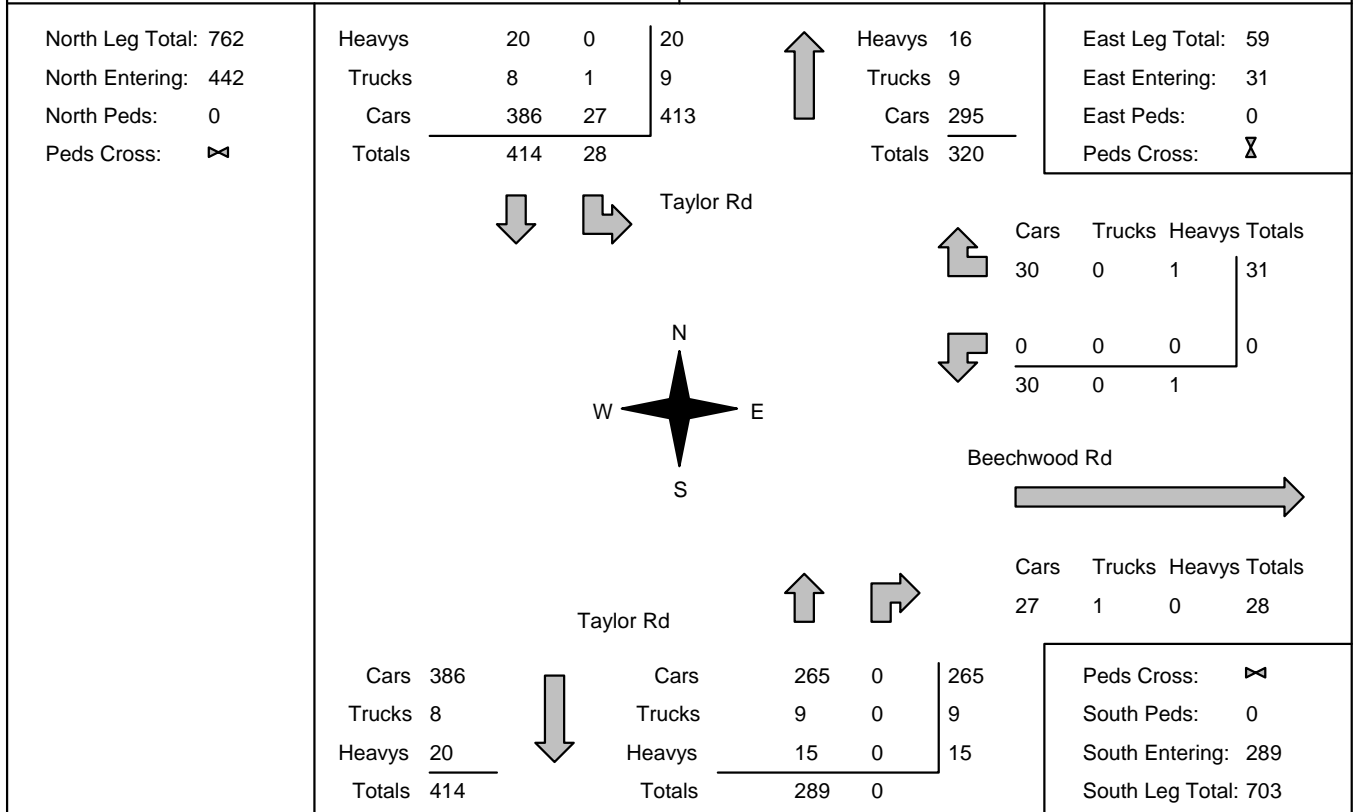
Morning Peak Diagram	Specified Period From: 7:00:00 To: 9:00:00	One Hour Peak From: 8:00:00 To: 9:00:00
Municipality: Thorold Site #: 2500400008 Intersection: Taylor Rd & Beechwood Rd TFR File #: 1 Count date: 15-Jan-25	Weather conditions: Person counted: Person prepared: Person checked:	
** Non-Signalized Intersection **	Major Road: Taylor Rd runs N/S	



Comments

Accu-Traffic Inc.

Afternoon Peak Diagram	Specified Period From: 16:00:00 To: 18:00:00	One Hour Peak From: 16:00:00 To: 17:00:00
Municipality: Thorold Site #: 2500400008 Intersection: Taylor Rd & Beechwood Rd TFR File #: 1 Count date: 15-Jan-25	Weather conditions: Person counted: Person prepared: Person checked:	
** Non-Signalized Intersection **	Major Road: Taylor Rd runs N/S	



Comments

Accu-Traffic Inc.

Total Count Diagram

Municipality: Thorold
Site #: 2500400008
Intersection: Taylor Rd & Beechwood Rd
TFR File #: 1
Count date: 15-Jan-25

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

Major Road: Taylor Rd runs N/S

North Leg Total: 2545
 North Entering: 1353
 North Peds: 0
 Peds Cross:

Heavys	97	0	97
Trucks	32	5	37
Cars	1148	71	1219
Totals	1277	76	

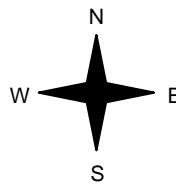


Heavys	79
Trucks	33
Cars	1080
Totals	1192

East Leg Total: 178
 East Entering: 100
 East Peds: 0
 Peds Cross:



Taylor Rd



	Cars	Trucks	Heavys	Totals
Northbound	95	1	2	98
Southbound	2	0	0	2
Totals	97	1	2	

Beechwood Rd



Cars	Trucks	Heavys	Totals
72	6	0	78

Cars	1150
Trucks	32
Heavys	97
Totals	1279



Cars	985	1	986
Trucks	32	1	33
Heavys	77	0	77
Totals	1094	2	

Peds Cross:
 South Peds: 0
 South Entering: 1096
 South Leg Total: 2375

Comments



Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Traffic Count Summary

Intersection: Taylor Rd & Beechwood Rd Count Date: 15-Jan-25 Municipality: Thorold

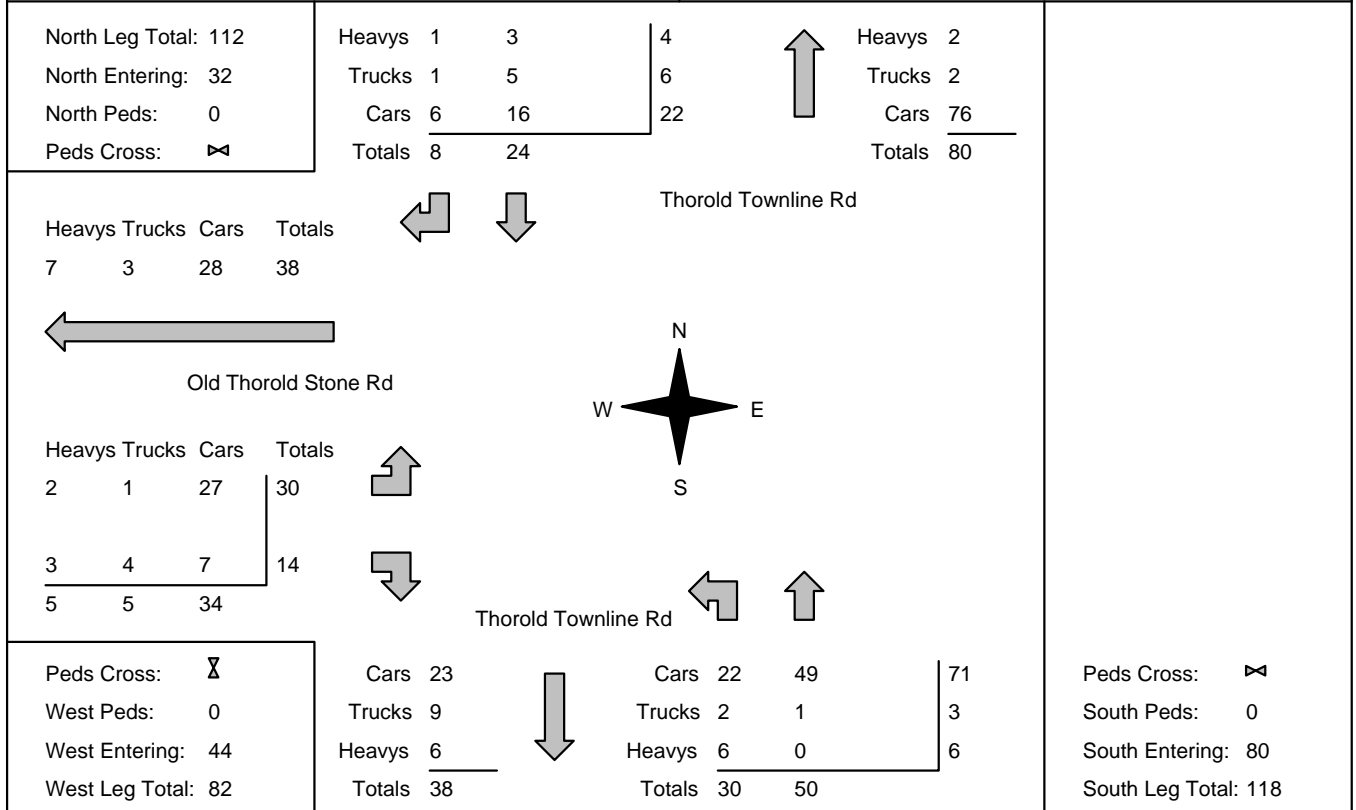
North Approach Totals						North/South Total Approaches	South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	6	222	0	228	0	494	8:00:00	0	266	0	266	0
9:00:00	17	320	0	337	0	657	9:00:00	0	318	2	320	0
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	28	414	0	442	0	731	17:00:00	0	289	0	289	0
18:00:00	25	321	0	346	0	567	18:00:00	0	221	0	221	0
Totals:	76	1277	0	1353	0	2449	S Totals:	0	1094	2	1096	0
East Approach Totals						East/West Total Approaches	West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	1	0	18	19	0	19	8:00:00	0	0	0	0	0
9:00:00	1	0	20	21	0	21	9:00:00	0	0	0	0	0
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	0	0	31	31	0	31	17:00:00	0	0	0	0	0
18:00:00	0	0	29	29	0	29	18:00:00	0	0	0	0	0
Totals:	2	0	98	100	0	100	W Totals:	0	0	0	0	0
Calculated Values for Traffic Crossing Major Street												
Hours Ending:	7:00	8:00	9:00	16:00			17:00	18:00	0:00	0:00		
Crossing Values:	0	1	1	0			0	0	0	0		

Accu-Traffic Inc.

Morning Peak Diagram	Specified Period From: 7:00:00 To: 9:00:00	One Hour Peak From: 7:30:00 To: 8:30:00
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Municipality: Thorold Site #: 2500400009 Intersection: Thorold Townline Rd & Old Thorold TFR File #: 1 Count date: 15-Jan-25	Weather conditions: Person counted: Person prepared: Person checked:
---	---

** Non-Signalized Intersection **	Major Road: Thorold Townline Rd runs N/S
--	---



Comments

Accu-Traffic Inc.

Afternoon Peak Diagram

Specified Period

From: 16:00:00
To: 18:00:00

One Hour Peak

From: 16:00:00
To: 17:00:00

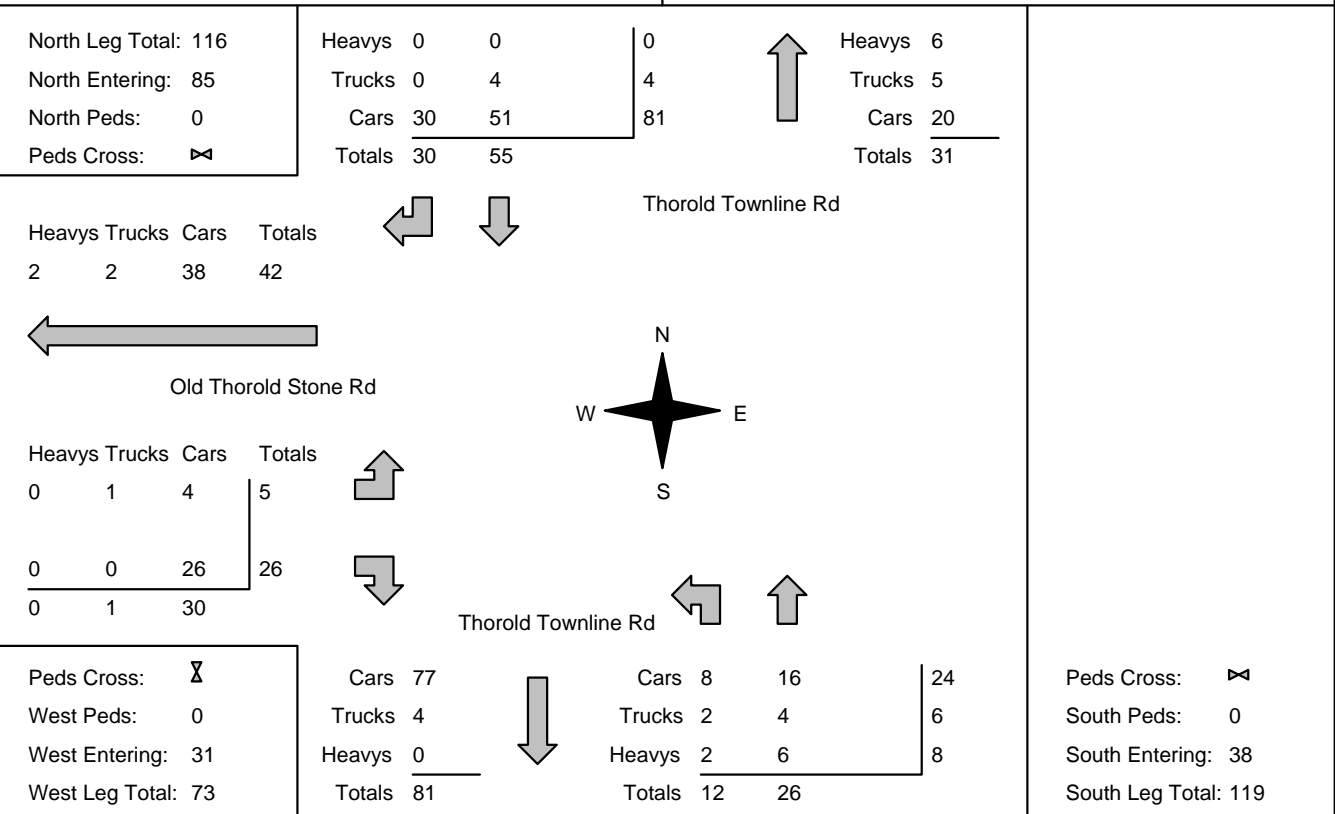
Municipality: Thorold
Site #: 2500400009
Intersection: Thorold Townline Rd & Old Thorold
TFR File #: 1
Count date: 15-Jan-25

Weather conditions:

Person counted:
Person prepared:
Person checked:

** Non-Signalized Intersection **

Major Road: Thorold Townline Rd runs N/S



Comments

Accu-Traffic Inc.

Total Count Diagram

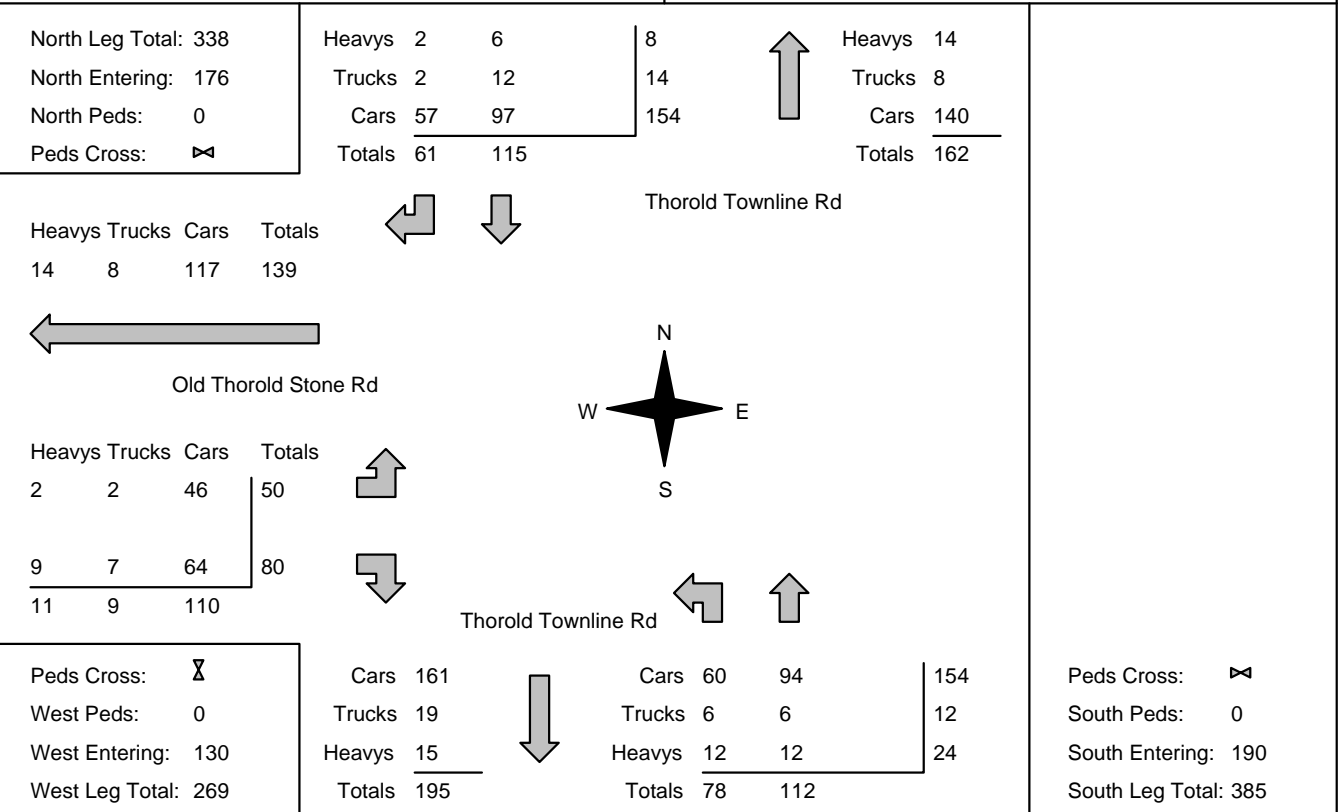
Municipality: Thorold
Site #: 2500400009
Intersection: Thorold Townline Rd & Old Thorold
TFR File #: 1
Count date: 15-Jan-25

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

Major Road: Thorold Townline Rd runs N/S



Comments



Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Traffic Count Summary

Intersection: Thorold Townline Rd & Old Thorol Count Date: 15-Jan-25 Municipality: Thorold

North Approach Totals						North/South Total Approaches	South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	0	21	9	30	0	102	8:00:00	34	38	0	72	0
9:00:00	0	25	7	32	0	95	9:00:00	20	43	0	63	0
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	0	55	30	85	0	123	17:00:00	12	26	0	38	0
18:00:00	0	14	15	29	0	46	18:00:00	12	5	0	17	0
Totals:	0	115	61	176	0	366	S Totals:	78	112	0	190	0
East Approach Totals						East/West Total Approaches	West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	0	0	0	0	0	40	8:00:00	23	0	17	40	0
9:00:00	0	0	0	0	0	35	9:00:00	22	0	13	35	0
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	0	0	0	0	0	31	17:00:00	5	0	26	31	0
18:00:00	0	0	0	0	0	24	18:00:00	0	0	24	24	0
Totals:	0	0	0	0	0	130	W Totals:	50	0	80	130	0
Calculated Values for Traffic Crossing Major Street												
Hours Ending:	7:00	8:00	9:00	16:00		17:00	18:00	0:00	0:00			
Crossing Values:	0	23	22	0		5	0	0	0			

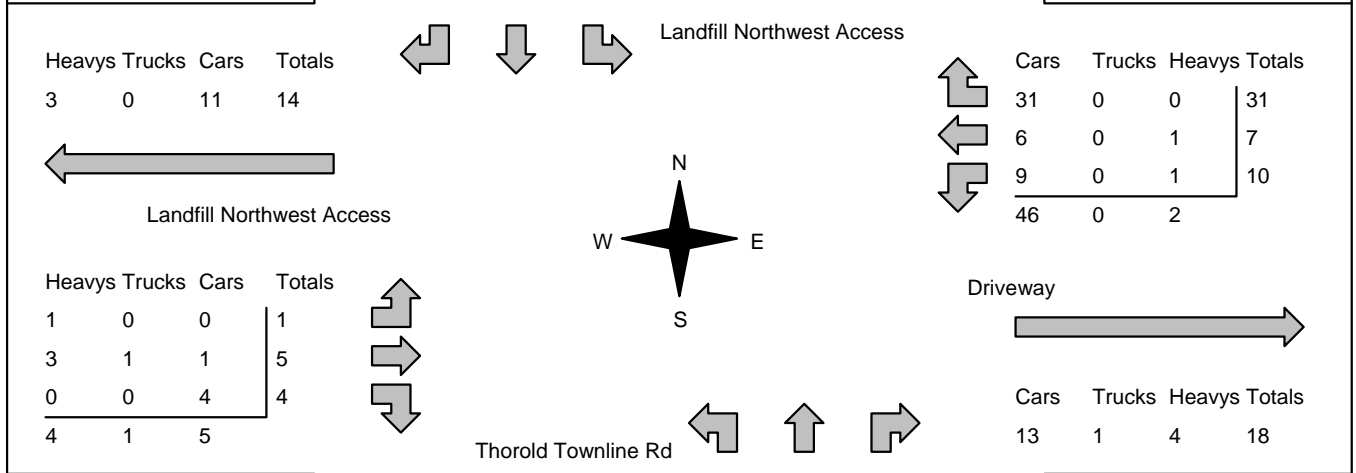
Accu-Traffic Inc.

Morning Peak Diagram	Specified Period From: 7:00:00 To: 9:00:00	One Hour Peak From: 7:45:00 To: 8:45:00
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Municipality: Thorold Site #: 2500400010 Intersection: Thorold Townline Rd & Landfill Nort TFR File #: 1 Count date: 15-Jan-25	Weather conditions: Person counted: Person prepared: Person checked:
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** Non-Signalized Intersection **	Major Road: Thorold Townline Rd runs N/S
--	---

North Leg Total: 70 North Entering: 8 North Peds: 0 Peds Cross: ☒	<table style="border-collapse: collapse; margin: auto;"> <tr><td>Heavys</td><td>1</td><td>0</td><td>0</td><td style="border-left: 1px solid black;">1</td></tr> <tr><td>Trucks</td><td>0</td><td>0</td><td>0</td><td style="border-left: 1px solid black;">0</td></tr> <tr><td>Cars</td><td>0</td><td>1</td><td>6</td><td style="border-left: 1px solid black;">7</td></tr> <tr><td>Totals</td><td>1</td><td>1</td><td>6</td><td style="border-left: 1px solid black;"></td></tr> </table>	Heavys	1	0	0	1	Trucks	0	0	0	0	Cars	0	1	6	7	Totals	1	1	6		<table style="border-collapse: collapse; margin: auto;"> <tr><td>Heavys</td><td>1</td></tr> <tr><td>Trucks</td><td>1</td></tr> <tr><td>Cars</td><td>60</td></tr> <tr><td>Totals</td><td style="border-top: 1px solid black;">62</td></tr> </table>	Heavys	1	Trucks	1	Cars	60	Totals	62	East Leg Total: 66 East Entering: 48 East Peds: 0 Peds Cross: ☒
Heavys	1	0	0	1																											
Trucks	0	0	0	0																											
Cars	0	1	6	7																											
Totals	1	1	6																												
Heavys	1																														
Trucks	1																														
Cars	60																														
Totals	62																														



Peds Cross: ☒ West Peds: 0 West Entering: 10 West Leg Total: 24	<table style="border-collapse: collapse; margin: auto;"> <tr><td>Cars</td><td>14</td></tr> <tr><td>Trucks</td><td>0</td></tr> <tr><td>Heavys</td><td>1</td></tr> <tr><td>Totals</td><td style="border-top: 1px solid black;">15</td></tr> </table>	Cars	14	Trucks	0	Heavys	1	Totals	15	<table style="border-collapse: collapse; margin: auto;"> <tr><td>Cars</td><td>5</td><td>29</td><td>6</td><td style="border-left: 1px solid black;">40</td></tr> <tr><td>Trucks</td><td>0</td><td>1</td><td>0</td><td style="border-left: 1px solid black;">1</td></tr> <tr><td>Heavys</td><td>1</td><td>0</td><td>1</td><td style="border-left: 1px solid black;">2</td></tr> <tr><td>Totals</td><td>6</td><td>30</td><td>7</td><td style="border-left: 1px solid black;"></td></tr> </table>	Cars	5	29	6	40	Trucks	0	1	0	1	Heavys	1	0	1	2	Totals	6	30	7		Peds Cross: ☒ South Peds: 0 South Entering: 43 South Leg Total: 58
Cars	14																														
Trucks	0																														
Heavys	1																														
Totals	15																														
Cars	5	29	6	40																											
Trucks	0	1	0	1																											
Heavys	1	0	1	2																											
Totals	6	30	7																												


Comments

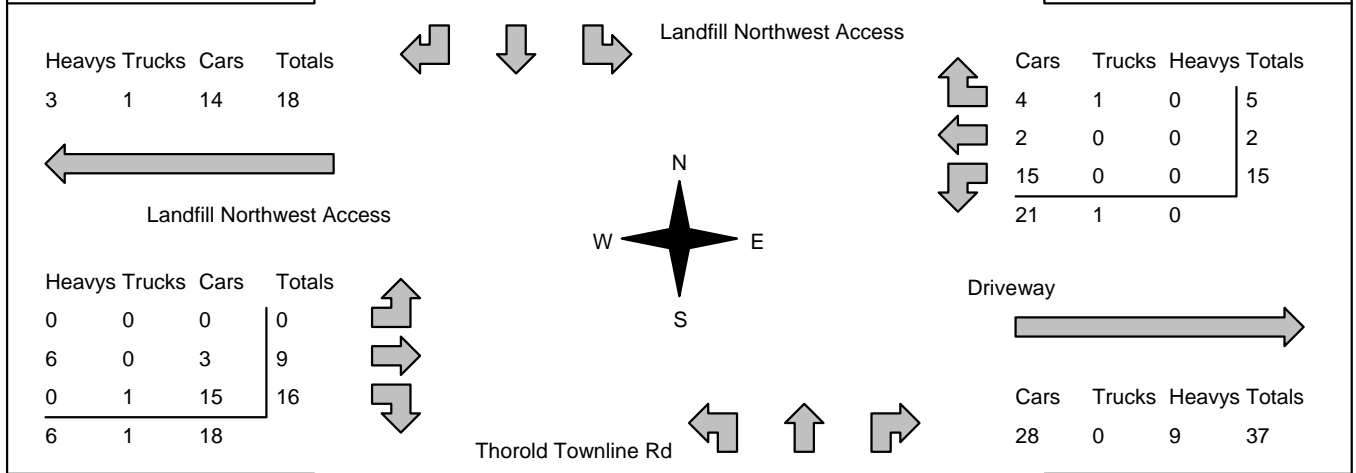
Accu-Traffic Inc.


Afternoon Peak Diagram	Specified Period From: 16:00:00 To: 18:00:00	One Hour Peak From: 16:00:00 To: 17:00:00
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Municipality: Thorold Site #: 2500400010 Intersection: Thorold Townline Rd & Landfill Nort TFR File #: 1 Count date: 15-Jan-25	Weather conditions: Person counted: Person prepared: Person checked:
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** Non-Signalized Intersection **	Major Road: Thorold Townline Rd runs N/S
--	---

North Leg Total: 61 North Entering: 53 North Peds: 0 Peds Cross: ☒	<table style="border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>0</td><td>2</td><td>0</td><td>2</td></tr> <tr><td>Cars</td><td>1</td><td>29</td><td>21</td><td>51</td></tr> <tr style="border-top: 1px solid black;"><td>Totals</td><td>1</td><td>31</td><td>21</td><td></td></tr> </table>	Heavys	0	0	0	0	Trucks	0	2	0	2	Cars	1	29	21	51	Totals	1	31	21			<table style="border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Trucks</td><td>2</td></tr> <tr><td>Cars</td><td>6</td></tr> <tr style="border-top: 1px solid black;"><td>Totals</td><td>8</td></tr> </table>	Heavys	0	Trucks	2	Cars	6	Totals	8	East Leg Total: 59 East Entering: 22 East Peds: 0 Peds Cross: ☒
Heavys	0	0	0	0																												
Trucks	0	2	0	2																												
Cars	1	29	21	51																												
Totals	1	31	21																													
Heavys	0																															
Trucks	2																															
Cars	6																															
Totals	8																															



Peds Cross: ☒ West Peds: 0 West Entering: 25 West Leg Total: 43	<table style="border-collapse: collapse;"> <tr><td>Cars</td><td>59</td></tr> <tr><td>Trucks</td><td>3</td></tr> <tr><td>Heavys</td><td>0</td></tr> <tr style="border-top: 1px solid black;"><td>Totals</td><td>62</td></tr> </table>	Cars	59	Trucks	3	Heavys	0	Totals	62		<table style="border-collapse: collapse;"> <tr><td>Cars</td><td>11</td><td>2</td><td>4</td><td>17</td></tr> <tr><td>Trucks</td><td>1</td><td>1</td><td>0</td><td>2</td></tr> <tr><td>Heavys</td><td>3</td><td>0</td><td>3</td><td>6</td></tr> <tr style="border-top: 1px solid black;"><td>Totals</td><td>15</td><td>3</td><td>7</td><td></td></tr> </table>	Cars	11	2	4	17	Trucks	1	1	0	2	Heavys	3	0	3	6	Totals	15	3	7		Peds Cross: ☒ South Peds: 0 South Entering: 25 South Leg Total: 87
Cars	59																															
Trucks	3																															
Heavys	0																															
Totals	62																															
Cars	11	2	4	17																												
Trucks	1	1	0	2																												
Heavys	3	0	3	6																												
Totals	15	3	7																													

Comments

Accu-Traffic Inc.

Total Count Diagram

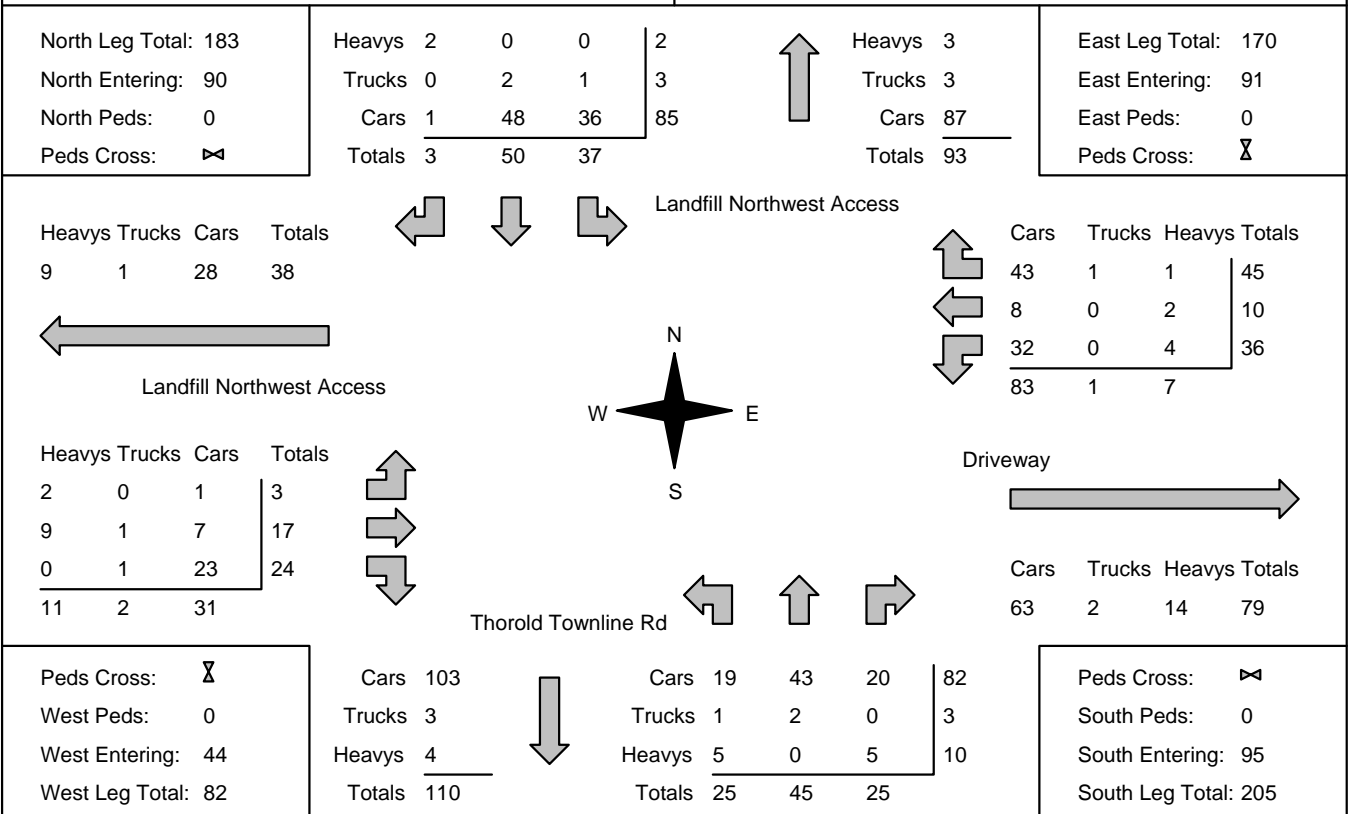
Municipality: Thorold
Site #: 2500400010
Intersection: Thorold Townline Rd & Landfill Nort
TFR File #: 1
Count date: 15-Jan-25

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

Major Road: Thorold Townline Rd runs N/S



Comments



Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Traffic Count Summary

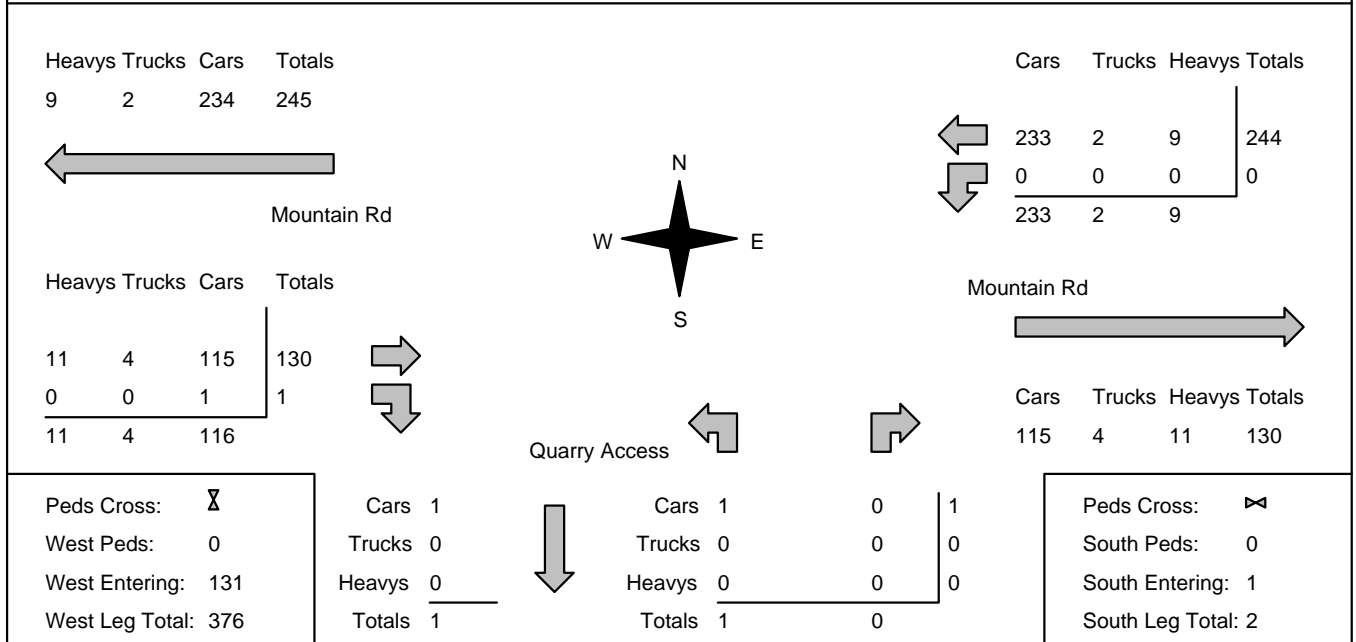
Intersection: Thorold Townline Rd & Landfill No Count Date: 15-Jan-25 Municipality: Thorold

North Approach Totals						North/South Total Approaches	South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	0	2	1	3	0	28	8:00:00	3	15	7	25	0
9:00:00	7	1	1	9	0	51	9:00:00	7	27	8	42	0
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	21	31	1	53	0	78	17:00:00	15	3	7	25	0
18:00:00	9	16	0	25	0	28	18:00:00	0	0	3	3	0
Totals:	37	50	3	90	0	185	S Totals:	25	45	25	95	0
East Approach Totals						East/West Total Approaches	West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	8	4	15	27	0	31	8:00:00	3	1	0	4	0
9:00:00	9	4	25	38	0	49	9:00:00	0	5	6	11	0
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	15	2	5	22	0	47	17:00:00	0	9	16	25	0
18:00:00	4	0	0	4	0	8	18:00:00	0	2	2	4	0
Totals:	36	10	45	91	0	135	W Totals:	3	17	24	44	0
Calculated Values for Traffic Crossing Major Street												
Hours Ending:	7:00	8:00	9:00	16:00		17:00	18:00	0:00	0:00			
Crossing Values:	0	15	14	0		24	6	0	0			

Accu-Traffic Inc.

Morning Peak Diagram	Specified Period From: 7:00:00 To: 9:00:00	One Hour Peak From: 7:45:00 To: 8:45:00
Municipality: Thorold Site #: 2500400011 Intersection: Mountain Rd & Quarry Access TFR File #: 1 Count date: 15-Jan-25	Weather conditions: Person counted: Person prepared: Person checked:	
** Non-Signalized Intersection **	Major Road: Mountain Rd runs W/E	

	East Leg Total: 374 East Entering: 244 East Peds: 0 Peds Cross: 8
--	--

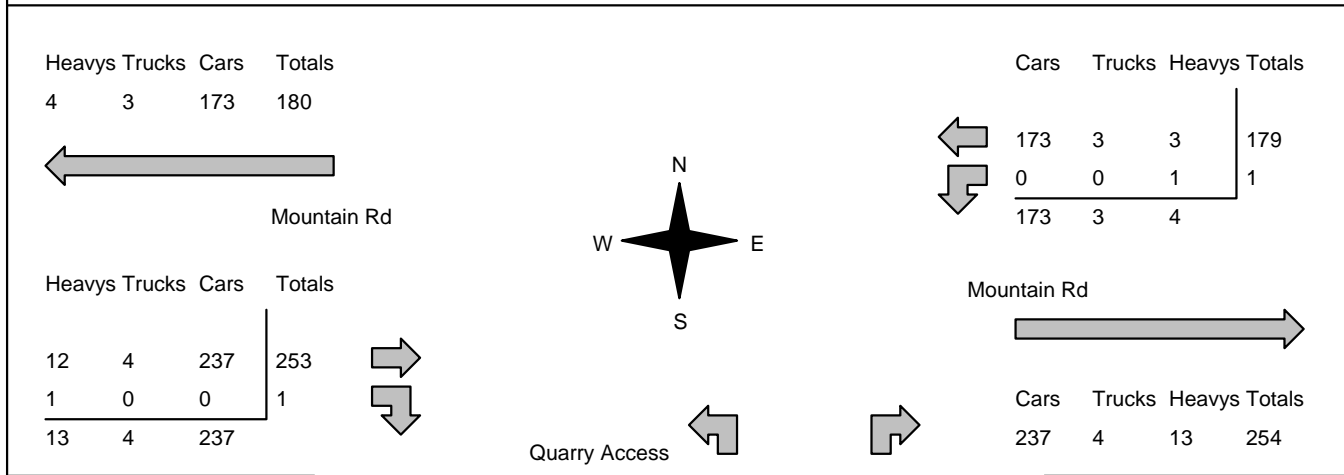


Comments

Accu-Traffic Inc.

Afternoon Peak Diagram	Specified Period From: 16:00:00 To: 18:00:00	One Hour Peak From: 16:00:00 To: 17:00:00
Municipality: Thorold Site #: 2500400011 Intersection: Mountain Rd & Quarry Access TFR File #: 1 Count date: 15-Jan-25	Weather conditions: Person counted: Person prepared: Person checked:	
** Non-Signalized Intersection **	Major Road: Mountain Rd runs W/E	

	East Leg Total: 434 East Entering: 180 East Peds: 0 Peds Cross: 8
--	--



Peds Cross: 8 West Peds: 0 West Entering: 254 West Leg Total: 434	<table style="width: 100%;"> <tr><td>Cars</td><td>0</td></tr> <tr><td>Trucks</td><td>0</td></tr> <tr><td>Heavys</td><td>2</td></tr> <tr><td colspan="2" style="border-top: 1px solid black;"></td></tr> <tr><td>Totals</td><td>2</td></tr> </table>	Cars	0	Trucks	0	Heavys	2			Totals	2	<table style="width: 100%;"> <tr><td>Cars</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Heavys</td><td>1</td><td>1</td><td>2</td></tr> <tr><td colspan="3" style="border-top: 1px solid black;"></td><td></td></tr> <tr><td>Totals</td><td>1</td><td>1</td><td></td></tr> </table>	Cars	0	0	0	Trucks	0	0	0	Heavys	1	1	2					Totals	1	1		Peds Cross: 8 South Peds: 0 South Entering: 2 South Leg Total: 4
Cars	0																																
Trucks	0																																
Heavys	2																																
Totals	2																																
Cars	0	0	0																														
Trucks	0	0	0																														
Heavys	1	1	2																														
Totals	1	1																															

Comments

Accu-Traffic Inc.

Total Count Diagram

Municipality: Thorold
Site #: 2500400011
Intersection: Mountain Rd & Quarry Access
TFR File #: 1
Count date: 15-Jan-25

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

Major Road: Mountain Rd runs W/E

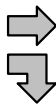
East Leg Total: 1424
 East Entering: 749
 East Peds: 0
 Peds Cross: 8

Heavys	Trucks	Cars	Totals
31	10	709	750

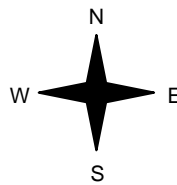


Mountain Rd

Heavys	Trucks	Cars	Totals
29	11	634	674
1	0	1	2
30	11	635	



Quarry Access



Cars	Trucks	Heavys	Totals
708	10	30	748
0	0	1	1
708	10	31	



Mountain Rd

Cars	Trucks	Heavys	Totals
634	11	30	675



Peds Cross: 8
 West Peds: 0
 West Entering: 676
 West Leg Total: 1426

Cars	1
Trucks	0
Heavys	2
Totals	3



Cars	1	0	1
Trucks	0	0	0
Heavys	1	1	2
Totals	2	1	

Peds Cross: 1
 South Peds: 1
 South Entering: 3
 South Leg Total: 6

Comments



Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc. Traffic Count Summary

Intersection: Mountain Rd & Quarry Access Count Date: 15-Jan-25 Municipality: Thorold


North Approach Totals						North/South Total Approaches	South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	0	0	0	0	0	0	8:00:00	0	0	0	0	0
9:00:00	0	0	0	0	0	1	9:00:00	1	0	0	1	0
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	0	0	0	0	0	2	17:00:00	1	0	1	2	0
18:00:00	0	0	0	0	0	0	18:00:00	0	0	0	0	1
Totals:	0	0	0	0	0	3	S Totals:	2	0	1	3	1
East Approach Totals						East/West Total Approaches	West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	0	176	0	176	0	268	8:00:00	0	92	0	92	0
9:00:00	0	238	0	238	0	370	9:00:00	0	131	1	132	0
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	1	179	0	180	0	434	17:00:00	0	253	1	254	0
18:00:00	0	155	0	155	0	353	18:00:00	0	198	0	198	0
Totals:	1	748	0	749	0	1425	W Totals:	0	674	2	676	0
Calculated Values for Traffic Crossing Major Street												
Hours Ending:	7:00	8:00	9:00	16:00		17:00	18:00	0:00	0:00			
Crossing Values:	0	0	1	0		1	0	0	0			

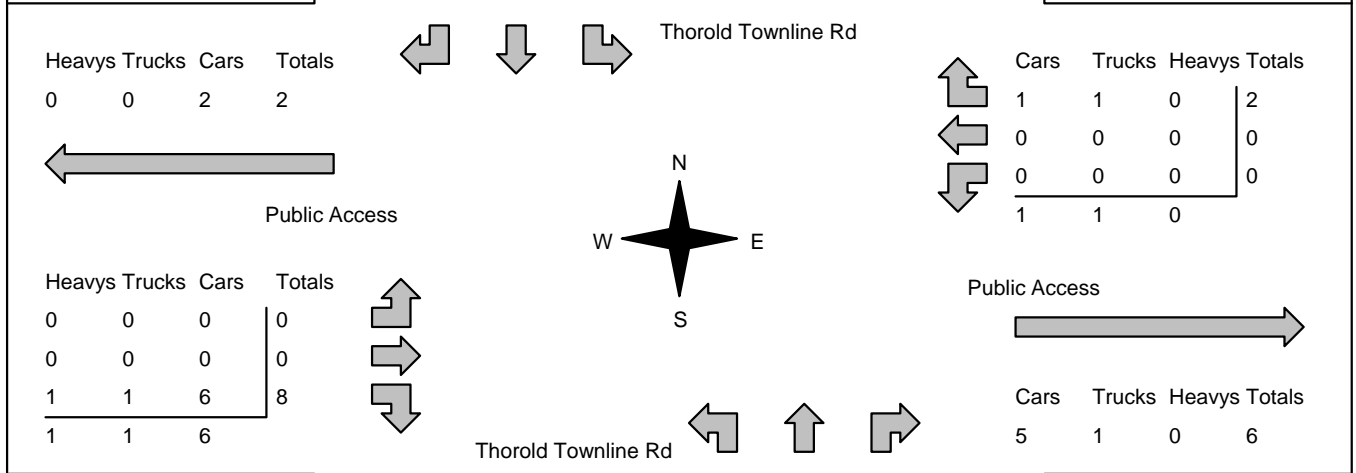
Accu-Traffic Inc.


Morning Peak Diagram	Specified Period From: 7:00:00 To: 9:00:00	One Hour Peak From: 7:30:00 To: 8:30:00
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Municipality: Thorold Site #: 2500400012 Intersection: Thorold Townline Rd & Public Acce TFR File #: 1 Count date: 15-Jan-25	Weather conditions: Person counted: Person prepared: Person checked:
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** Non-Signalized Intersection **	Major Road: Thorold Townline Rd runs N/S
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North Leg Total: 70 North Entering: 14 North Peds: 0 Peds Cross: \boxtimes	<table style="border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td><td>1</td><td>0</td><td>1</td></tr> <tr><td>Trucks</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Cars</td><td>0</td><td>10</td><td>3</td><td>13</td></tr> <tr><td>Totals</td><td>0</td><td>11</td><td>3</td><td></td></tr> </table>	Heavys	0	1	0	1	Trucks	0	0	0	0	Cars	0	10	3	13	Totals	0	11	3			<table style="border-collapse: collapse;"> <tr><td>Heavys</td><td>3</td></tr> <tr><td>Trucks</td><td>1</td></tr> <tr><td>Cars</td><td>52</td></tr> <tr><td>Totals</td><td>56</td></tr> </table>	Heavys	3	Trucks	1	Cars	52	Totals	56	East Leg Total: 8 East Entering: 2 East Peds: 0 Peds Cross: \boxtimes
Heavys	0	1	0	1																												
Trucks	0	0	0	0																												
Cars	0	10	3	13																												
Totals	0	11	3																													
Heavys	3																															
Trucks	1																															
Cars	52																															
Totals	56																															



Peds Cross: \boxtimes West Peds: 0 West Entering: 8 West Leg Total: 10	<table style="border-collapse: collapse;"> <tr><td>Cars</td><td>16</td></tr> <tr><td>Trucks</td><td>1</td></tr> <tr><td>Heavys</td><td>2</td></tr> <tr><td>Totals</td><td>19</td></tr> </table>	Cars	16	Trucks	1	Heavys	2	Totals	19		<table style="border-collapse: collapse;"> <tr><td>Cars</td><td>2</td><td>51</td><td>2</td><td>55</td></tr> <tr><td>Trucks</td><td>0</td><td>0</td><td>1</td><td>1</td></tr> <tr><td>Heavys</td><td>0</td><td>3</td><td>0</td><td>3</td></tr> <tr><td>Totals</td><td>2</td><td>54</td><td>3</td><td></td></tr> </table>	Cars	2	51	2	55	Trucks	0	0	1	1	Heavys	0	3	0	3	Totals	2	54	3		Peds Cross: \boxtimes South Peds: 0 South Entering: 59 South Leg Total: 78
Cars	16																															
Trucks	1																															
Heavys	2																															
Totals	19																															
Cars	2	51	2	55																												
Trucks	0	0	1	1																												
Heavys	0	3	0	3																												
Totals	2	54	3																													


Comments

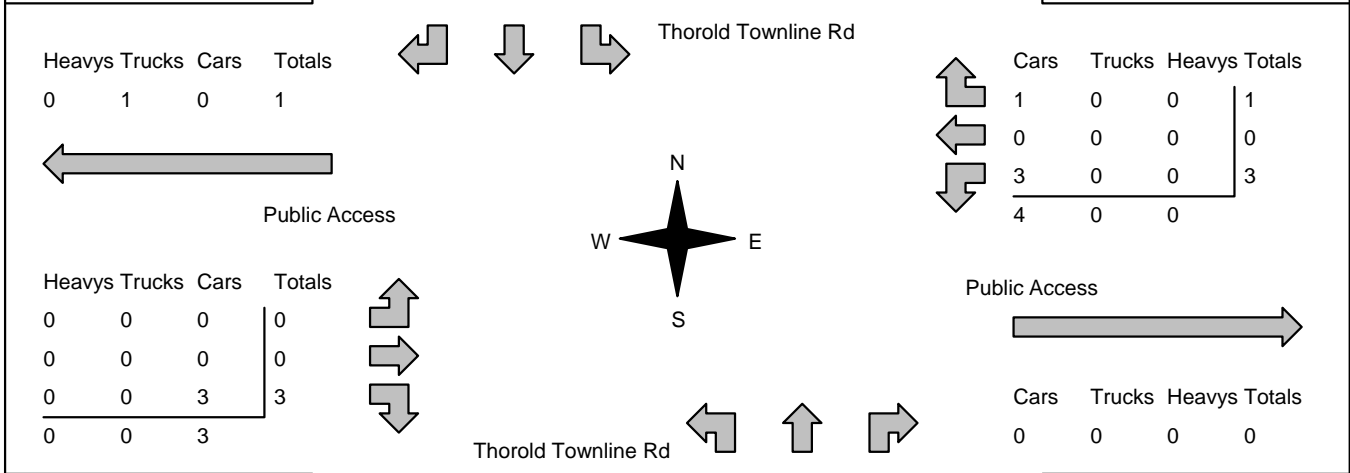
Accu-Traffic Inc.


Afternoon Peak Diagram	Specified Period From: 16:00:00 To: 18:00:00	One Hour Peak From: 16:00:00 To: 17:00:00
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Municipality: Thorold Site #: 2500400012 Intersection: Thorold Townline Rd & Public Acce TFR File #: 1 Count date: 15-Jan-25	Weather conditions: Person counted: Person prepared: Person checked:
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** Non-Signalized Intersection **	Major Road: Thorold Townline Rd runs N/S
--	---

North Leg Total: 95 North Entering: 66 North Peds: 0 Peds Cross: \times	<table style="border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>0</td><td>4</td><td>0</td><td>4</td></tr> <tr><td>Cars</td><td>0</td><td>62</td><td>0</td><td>62</td></tr> <tr style="border-top: 1px solid black;"><td>Totals</td><td>0</td><td>66</td><td>0</td><td></td></tr> </table>	Heavys	0	0	0	0	Trucks	0	4	0	4	Cars	0	62	0	62	Totals	0	66	0		 <table style="border-collapse: collapse;"> <tr><td>Heavys</td><td>6</td></tr> <tr><td>Trucks</td><td>3</td></tr> <tr><td>Cars</td><td>20</td></tr> <tr style="border-top: 1px solid black;"><td>Totals</td><td>29</td></tr> </table>	Heavys	6	Trucks	3	Cars	20	Totals	29	East Leg Total: 4 East Entering: 4 East Peds: 0 Peds Cross: \times
Heavys	0	0	0	0																											
Trucks	0	4	0	4																											
Cars	0	62	0	62																											
Totals	0	66	0																												
Heavys	6																														
Trucks	3																														
Cars	20																														
Totals	29																														



Peds Cross: \times West Peds: 0 West Entering: 3 West Leg Total: 4		Peds Cross: \times South Peds: 0 South Entering: 29 South Leg Total: 101
---	---	---

Comments

Accu-Traffic Inc.

Total Count Diagram


Municipality: Thorold
Site #: 2500400012
Intersection: Thorold Townline Rd & Public Acce
TFR File #: 1
Count date: 15-Jan-25

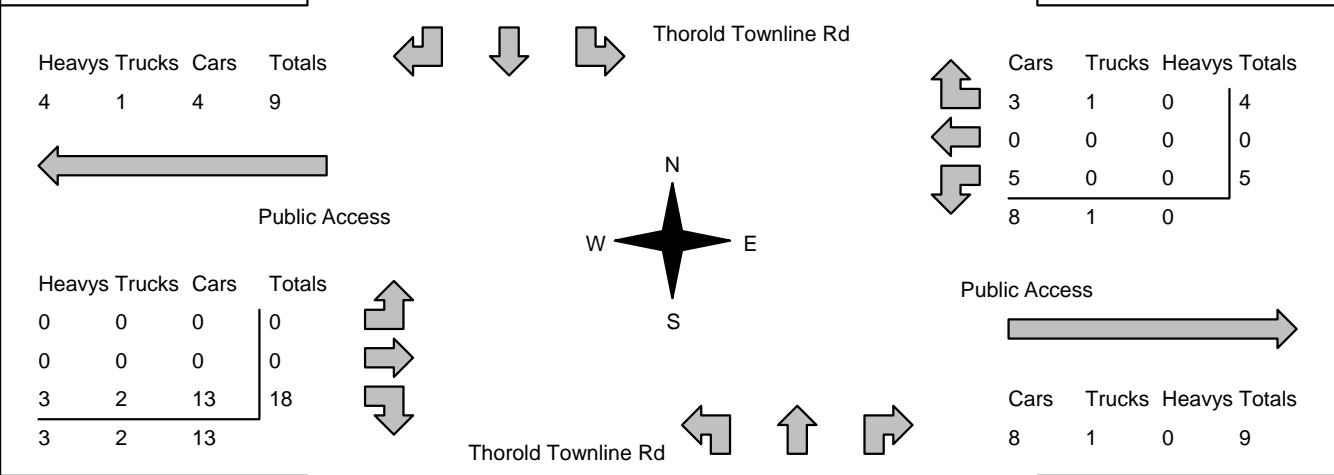
Weather conditions:


Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

Major Road: Thorold Townline Rd runs N/S

North Leg Total: 236	Heavys 0 3 0 3		Heavys 11	East Leg Total: 18
North Entering: 122	Trucks 0 5 0 5		Trucks 4	East Entering: 9
North Peds: 0	Cars 0 110 4 114		Cars 99	East Peds: 0
Peds Cross: \times	Totals 0 118 4		Totals 114	Peds Cross: \times



Peds Cross: \times	Cars 128		Cars 4 96 4 104	Peds Cross: \times
West Peds: 0	Trucks 7		Trucks 1 3 1 5	South Peds: 0
West Entering: 18	Heavys 6		Heavys 4 11 0 15	South Entering: 124
West Leg Total: 27	Totals 141		Totals 9 110 5	South Leg Total: 265

Comments



Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Traffic Count Summary

Intersection: Thorold Townline Rd & Public Acc Count Date: 15-Jan-25 Municipality: Thorold


North Approach Totals						North/South Total Approaches	South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	1	9	0	10	0	47	8:00:00	2	31	4	37	0
9:00:00	3	15	0	18	0	71	9:00:00	4	48	1	53	0
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	0	66	0	66	0	95	17:00:00	1	28	0	29	0
18:00:00	0	28	0	28	0	33	18:00:00	2	3	0	5	0
Totals:	4	118	0	122	0	246	S Totals:	9	110	5	124	0
East Approach Totals						East/West Total Approaches	West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	0	0	2	2	0	12	8:00:00	0	0	10	10	0
9:00:00	1	0	1	2	0	7	9:00:00	0	0	5	5	0
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	3	0	1	4	0	7	17:00:00	0	0	3	3	0
18:00:00	1	0	0	1	0	1	18:00:00	0	0	0	0	0
Totals:	5	0	4	9	0	27	W Totals:	0	0	18	18	0
Calculated Values for Traffic Crossing Major Street												
Hours Ending:	7:00	8:00	9:00	16:00			17:00	18:00	0:00	0:00		
Crossing Values:	0	0	1	0			3	1	0	0		

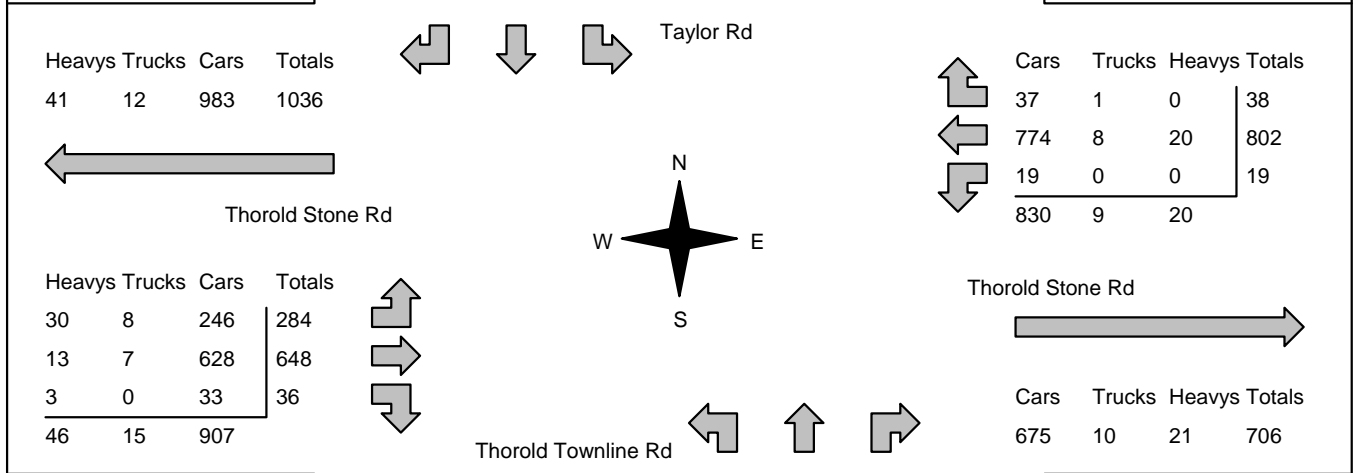
Accu-Traffic Inc.


Morning Peak Diagram	Specified Period From: 7:00:00 To: 9:00:00	One Hour Peak From: 7:45:00 To: 8:45:00
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Municipality: Thorold Site #: 2500400001 Intersection: Thorold Stone Rd & Taylor Rd TFR File #: 1 Count date: 15-Jan-25	Weather conditions: Person counted: Person prepared: Person checked:
--	---

** Signalized Intersection **	Major Road: Thorold Stone Rd runs W/E
--------------------------------------	--

North Leg Total: 744 North Entering: 304 North Peds: 0 Peds Cross: \times	<table style="border-collapse: collapse;"> <tr><td>Heavys</td><td>20</td><td>7</td><td>6</td><td style="border-left: 1px solid black;">33</td></tr> <tr><td>Trucks</td><td>3</td><td>6</td><td>3</td><td style="border-left: 1px solid black;">12</td></tr> <tr><td>Cars</td><td>184</td><td>54</td><td>21</td><td style="border-left: 1px solid black;">259</td></tr> <tr><td>Totals</td><td>207</td><td>67</td><td>30</td><td style="border-left: 1px solid black;"></td></tr> </table>	Heavys	20	7	6	33	Trucks	3	6	3	12	Cars	184	54	21	259	Totals	207	67	30			<table style="border-collapse: collapse;"> <tr><td>Heavys</td><td>39</td></tr> <tr><td>Trucks</td><td>9</td></tr> <tr><td>Cars</td><td>392</td></tr> <tr><td>Totals</td><td>440</td></tr> </table>	Heavys	39	Trucks	9	Cars	392	Totals	440	East Leg Total: 1565 East Entering: 859 East Peds: 0 Peds Cross: \times
Heavys	20	7	6	33																												
Trucks	3	6	3	12																												
Cars	184	54	21	259																												
Totals	207	67	30																													
Heavys	39																															
Trucks	9																															
Cars	392																															
Totals	440																															



Peds Cross: \times West Peds: 0 West Entering: 968 West Leg Total: 2004	<table style="border-collapse: collapse;"> <tr><td>Cars</td><td>106</td></tr> <tr><td>Trucks</td><td>6</td></tr> <tr><td>Heavys</td><td>10</td></tr> <tr><td>Totals</td><td>122</td></tr> </table>	Cars	106	Trucks	6	Heavys	10	Totals	122		<table style="border-collapse: collapse;"> <tr><td>Cars</td><td>25</td><td>109</td><td>26</td><td style="border-left: 1px solid black;">160</td></tr> <tr><td>Trucks</td><td>1</td><td>0</td><td>0</td><td style="border-left: 1px solid black;">1</td></tr> <tr><td>Heavys</td><td>1</td><td>9</td><td>2</td><td style="border-left: 1px solid black;">12</td></tr> <tr><td>Totals</td><td>27</td><td>118</td><td>28</td><td style="border-left: 1px solid black;"></td></tr> </table>	Cars	25	109	26	160	Trucks	1	0	0	1	Heavys	1	9	2	12	Totals	27	118	28		Peds Cross: \times South Peds: 0 South Entering: 173 South Leg Total: 295
Cars	106																															
Trucks	6																															
Heavys	10																															
Totals	122																															
Cars	25	109	26	160																												
Trucks	1	0	0	1																												
Heavys	1	9	2	12																												
Totals	27	118	28																													

Comments

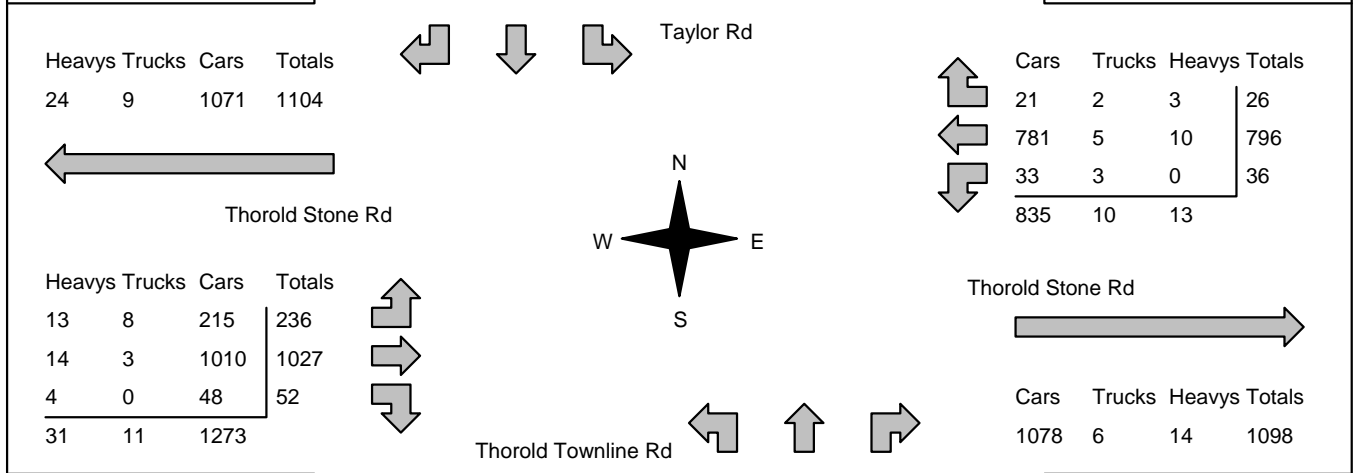
Accu-Traffic Inc.

Afternoon Peak Diagram	Specified Period From: 16:00:00 To: 18:00:00	One Hour Peak From: 16:00:00 To: 17:00:00
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Municipality: Thorold Site #: 2500400001 Intersection: Thorold Stone Rd & Taylor Rd TFR File #: 1 Count date: 15-Jan-25	Weather conditions: Person counted: Person prepared: Person checked:
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** Signalized Intersection **	Major Road: Thorold Stone Rd runs W/E
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North Leg Total: 791 North Entering: 449 North Peds: 0 Peds Cross: \times	<table border="1" style="border-collapse: collapse;"> <tr><td>Heavys</td><td>10</td><td>4</td><td>0</td><td>14</td></tr> <tr><td>Trucks</td><td>4</td><td>4</td><td>2</td><td>10</td></tr> <tr><td>Cars</td><td>235</td><td>141</td><td>49</td><td>425</td></tr> <tr><td>Totals</td><td>249</td><td>149</td><td>51</td><td></td></tr> </table>	Heavys	10	4	0	14	Trucks	4	4	2	10	Cars	235	141	49	425	Totals	249	149	51		<table border="1" style="border-collapse: collapse;"> <tr><td>Heavys</td><td>20</td></tr> <tr><td>Trucks</td><td>14</td></tr> <tr><td>Cars</td><td>308</td></tr> <tr><td>Totals</td><td>342</td></tr> </table>	Heavys	20	Trucks	14	Cars	308	Totals	342	East Leg Total: 1956 East Entering: 858 East Peds: 0 Peds Cross: \times
Heavys	10	4	0	14																											
Trucks	4	4	2	10																											
Cars	235	141	49	425																											
Totals	249	149	51																												
Heavys	20																														
Trucks	14																														
Cars	308																														
Totals	342																														



Peds Cross: \times West Peds: 0 West Entering: 1315 West Leg Total: 2419	<table border="1" style="border-collapse: collapse;"> <tr><td>Cars</td><td>222</td></tr> <tr><td>Trucks</td><td>7</td></tr> <tr><td>Heavys</td><td>8</td></tr> <tr><td>Totals</td><td>237</td></tr> </table>	Cars	222	Trucks	7	Heavys	8	Totals	237	<table border="1" style="border-collapse: collapse;"> <tr><td>Cars</td><td>55</td><td>72</td><td>19</td><td>146</td></tr> <tr><td>Trucks</td><td>0</td><td>4</td><td>1</td><td>5</td></tr> <tr><td>Heavys</td><td>4</td><td>4</td><td>0</td><td>8</td></tr> <tr><td>Totals</td><td>59</td><td>80</td><td>20</td><td></td></tr> </table>	Cars	55	72	19	146	Trucks	0	4	1	5	Heavys	4	4	0	8	Totals	59	80	20		Peds Cross: \times South Peds: 0 South Entering: 159 South Leg Total: 396
Cars	222																														
Trucks	7																														
Heavys	8																														
Totals	237																														
Cars	55	72	19	146																											
Trucks	0	4	1	5																											
Heavys	4	4	0	8																											
Totals	59	80	20																												

Comments

Accu-Traffic Inc.

Total Count Diagram

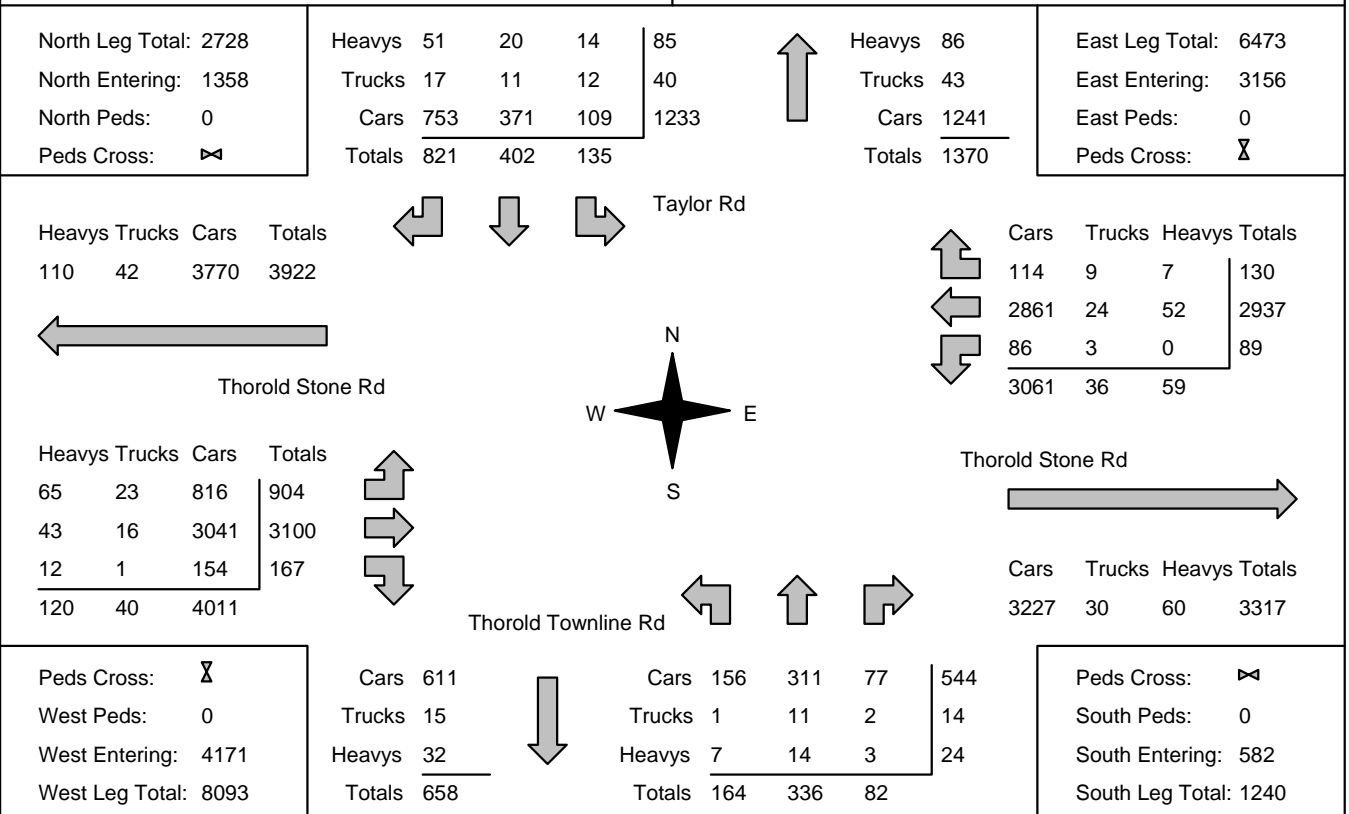
Municipality: Thorold
Site #: 2500400001
Intersection: Thorold Stone Rd & Taylor Rd
TFR File #: 1
Count date: 15-Jan-25

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Thorold Stone Rd runs W/E



Comments



Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Traffic Count Summary

Intersection: Thorold Stone Rd & Taylor Rd Count Date: 15-Jan-25 Municipality: Thorold

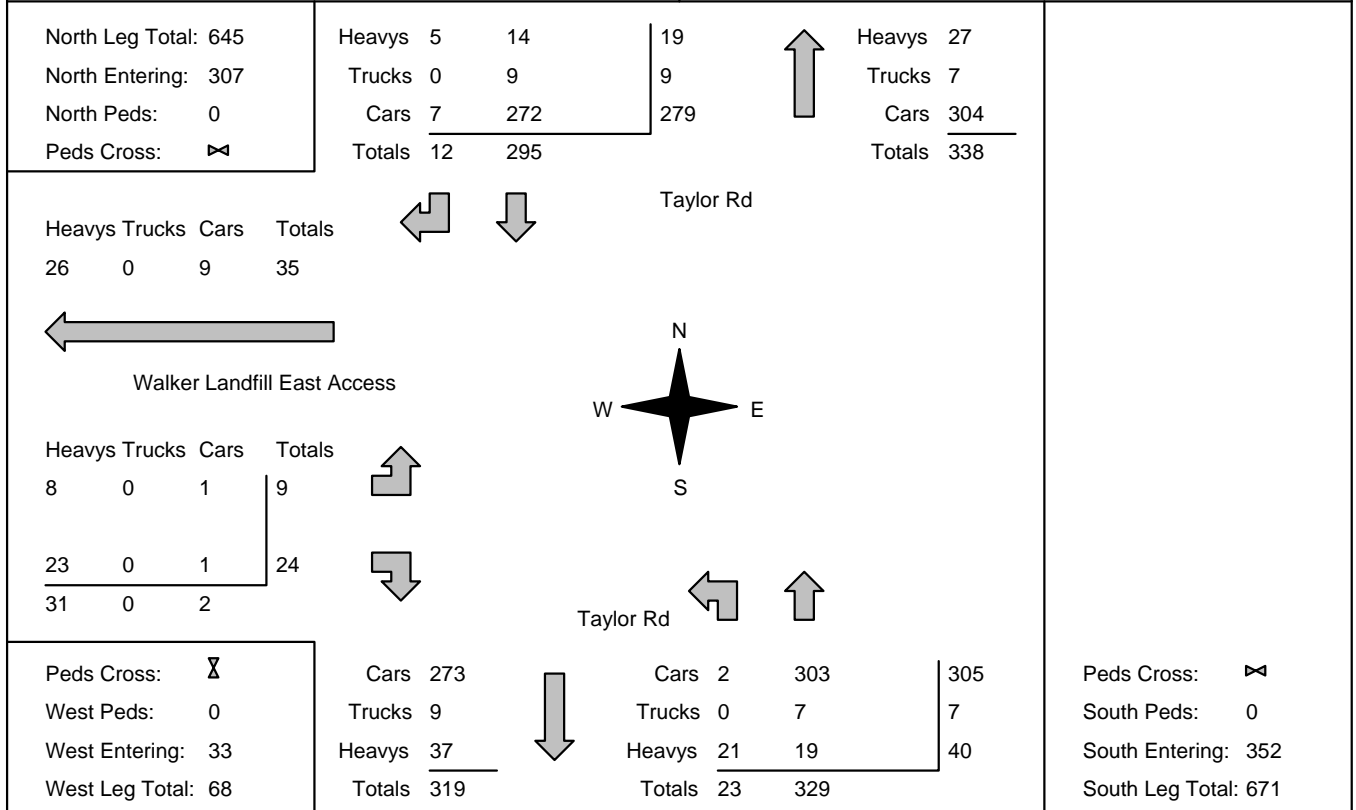
North Approach Totals						North/South Total Approaches	South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	32	60	134	226	0	350	8:00:00	19	87	18	124	0
9:00:00	28	75	226	329	0	499	9:00:00	31	111	28	170	0
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	51	149	249	449	0	608	17:00:00	59	80	20	159	0
18:00:00	24	118	212	354	0	483	18:00:00	55	58	16	129	0
Totals:	135	402	821	1358	0	1940	S Totals:	164	336	82	582	0
East Approach Totals						East/West Total Approaches	West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	11	595	43	649	0	1451	8:00:00	246	529	27	802	0
9:00:00	18	807	39	864	0	1803	9:00:00	249	652	38	939	0
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	36	796	26	858	0	2173	17:00:00	236	1027	52	1315	0
18:00:00	24	739	22	785	0	1900	18:00:00	173	892	50	1115	0
Totals:	89	2937	130	3156	0	7327	W Totals:	904	3100	167	4171	0
Calculated Values for Traffic Crossing Major Street												
Hours Ending:	7:00	8:00	9:00	16:00			17:00	18:00	0:00	0:00		
Crossing Values:	0	138	170	0			259	197	0	0		

Accu-Traffic Inc.

Morning Peak Diagram	Specified Period From: 7:00:00 To: 9:00:00	One Hour Peak From: 7:45:00 To: 8:45:00
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Municipality: Thorold Site #: 2500400002 Intersection: Taylor Rd & Walker Landfill East Ac TFR File #: 1 Count date: 15-Jan-25	Weather conditions: Person counted: Person prepared: Person checked:
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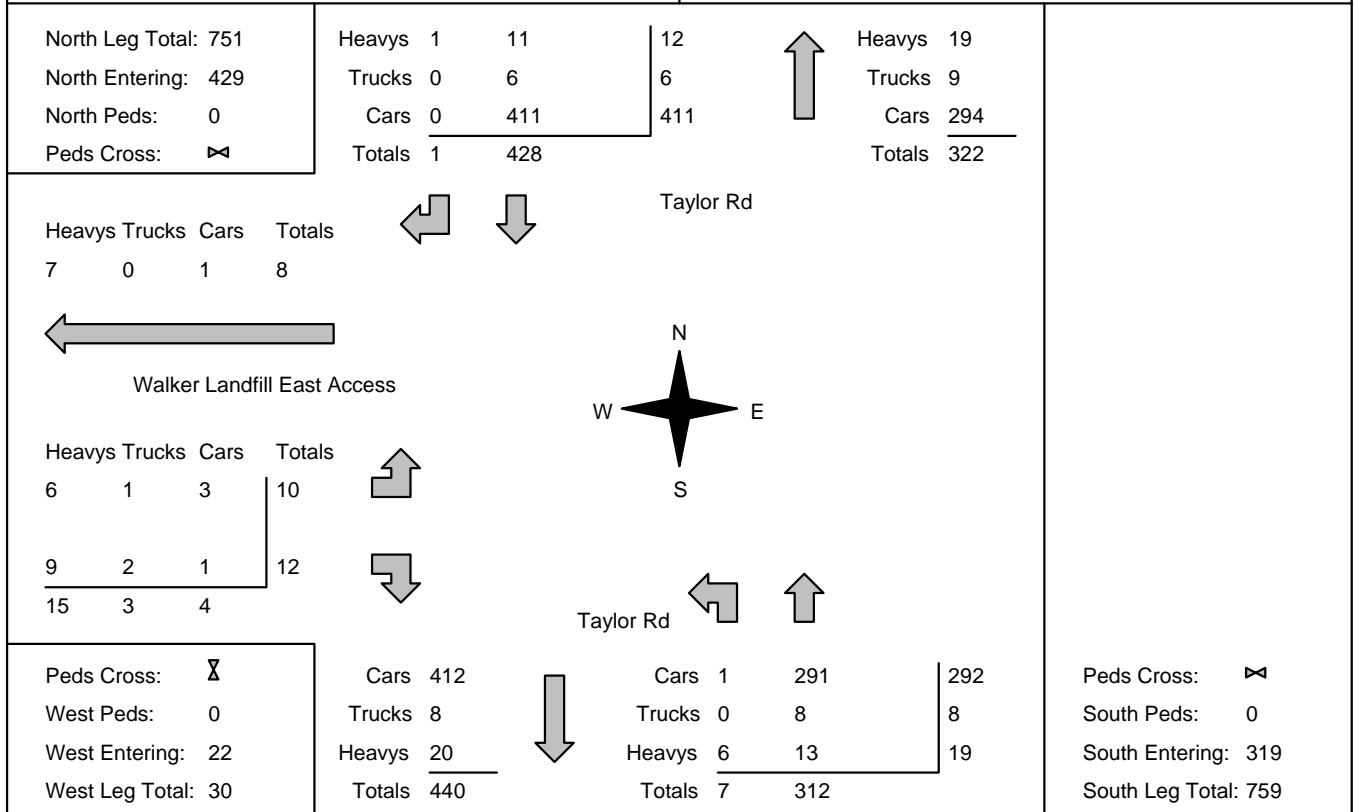
** Signalized Intersection **	Major Road: Taylor Rd runs N/S
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Comments

Accu-Traffic Inc.

Afternoon Peak Diagram	Specified Period From: 16:00:00 To: 18:00:00	One Hour Peak From: 16:00:00 To: 17:00:00
Municipality: Thorold Site #: 2500400002 Intersection: Taylor Rd & Walker Landfill East Ac TFR File #: 1 Count date: 15-Jan-25	Weather conditions: Person counted: Person prepared: Person checked:	
** Signalized Intersection **		Major Road: Taylor Rd runs N/S



Comments

Accu-Traffic Inc.

Total Count Diagram

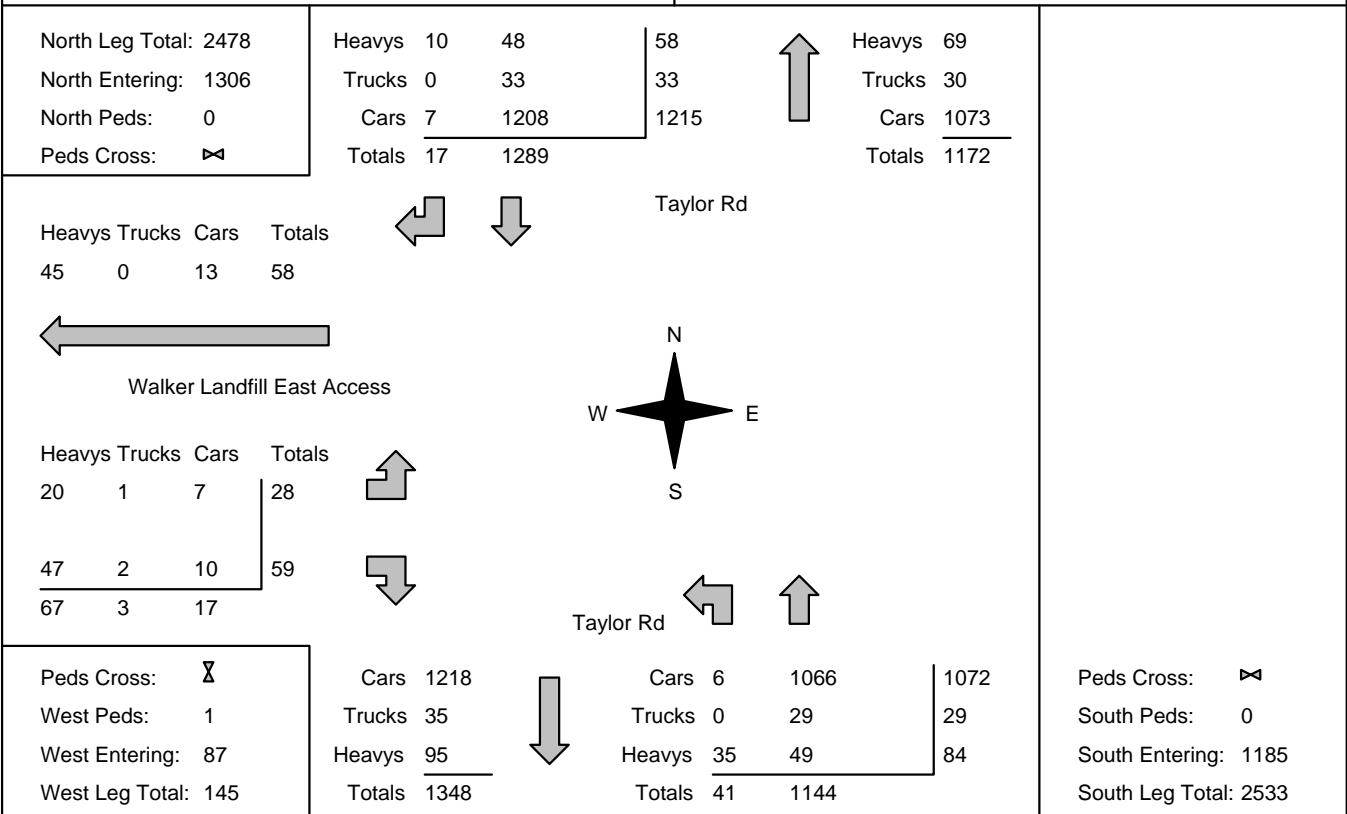
Municipality: Thorold
Site #: 2500400002
Intersection: Taylor Rd & Walker Landfill East Ac
TFR File #: 1
Count date: 15-Jan-25

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Taylor Rd runs N/S



Comments



Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Traffic Count Summary

Intersection: Taylor Rd & Walker Landfill East A Count Date: 15-Jan-25 Municipality: Thorold

North Approach Totals						North/South Total Approaches	South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	0	211	6	217	0	497	8:00:00	15	265	0	280	0
9:00:00	0	309	10	319	0	653	9:00:00	18	316	0	334	0
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	0	428	1	429	0	748	17:00:00	7	312	0	319	0
18:00:00	0	341	0	341	0	593	18:00:00	1	251	0	252	0
Totals:	0	1289	17	1306	0	2491	S Totals:	41	1144	0	1185	0
East Approach Totals						East/West Total Approaches	West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	0	0	0	0	0	19	8:00:00	2	0	17	19	0
9:00:00	0	0	0	0	0	38	9:00:00	12	0	26	38	1
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	0	0	0	0	0	22	17:00:00	10	0	12	22	0
18:00:00	0	0	0	0	0	8	18:00:00	4	0	4	8	0
Totals:	0	0	0	0	0	87	W Totals:	28	0	59	87	1
Calculated Values for Traffic Crossing Major Street												
Hours Ending:	7:00	8:00	9:00	16:00			17:00	18:00	0:00	0:00		
Crossing Values:	0	2	12	0			10	4	0	0		



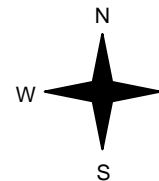
Accu-Traffic Inc.

Count Date: 15-Jan-25 Site #: 2500400002

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Heavys - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	31	31	0	0	0	0	5	5	0	0	0	0	3	3	0	0	0	0
7:30:00	0	0	72	41	0	0	0	0	5	0	0	0	0	0	12	9	2	2	0	0
7:45:00	0	0	130	58	0	0	0	0	8	3	0	0	0	0	14	2	4	2	0	0
8:00:00	0	0	185	55	2	2	0	0	9	1	0	0	0	0	17	3	4	0	0	0
8:15:00	0	0	247	62	6	4	0	0	10	1	0	0	0	0	20	3	5	1	0	0
8:30:00	0	0	323	76	6	0	0	0	12	2	0	0	0	0	22	2	6	1	0	0
8:45:00	0	0	402	79	7	1	0	0	17	5	0	0	0	0	28	6	9	3	0	0
9:00:00	0	0	464	62	7	0	0	0	23	6	0	0	0	0	33	5	9	0	0	0
9:15:00	0	0	464	0	7	0	0	0	23	0	0	0	0	0	33	0	9	0	0	0
16:00:00	0	0	464	0	7	0	0	0	23	0	0	0	0	0	33	0	9	0	0	0
16:15:00	0	0	560	96	7	0	0	0	28	5	0	0	0	0	39	6	10	1	0	0
16:30:00	0	0	655	95	7	0	0	0	29	1	0	0	0	0	43	4	10	0	0	0
16:45:00	0	0	776	121	7	0	0	0	29	0	0	0	0	0	44	1	10	0	0	0
17:00:00	0	0	875	99	7	0	0	0	29	0	0	0	0	0	44	0	10	0	0	0
17:15:00	0	0	962	87	7	0	0	0	31	2	0	0	0	0	44	0	10	0	0	0
17:30:00	0	0	1062	100	7	0	0	0	31	0	0	0	0	0	45	1	10	0	0	0
17:45:00	0	0	1150	88	7	0	0	0	32	1	0	0	0	0	47	2	10	0	0	0
18:00:00	0	0	1208	58	7	0	0	0	33	1	0	0	0	0	48	1	10	0	0	0
18:15:00	0	0	1208	0	7	0	0	0	33	0	0	0	0	0	48	0	10	0	0	0
18:15:15	0	0	1208	0	7	0	0	0	33	0	0	0	0	0	48	0	10	0	0	0

Accu-Traffic Inc.

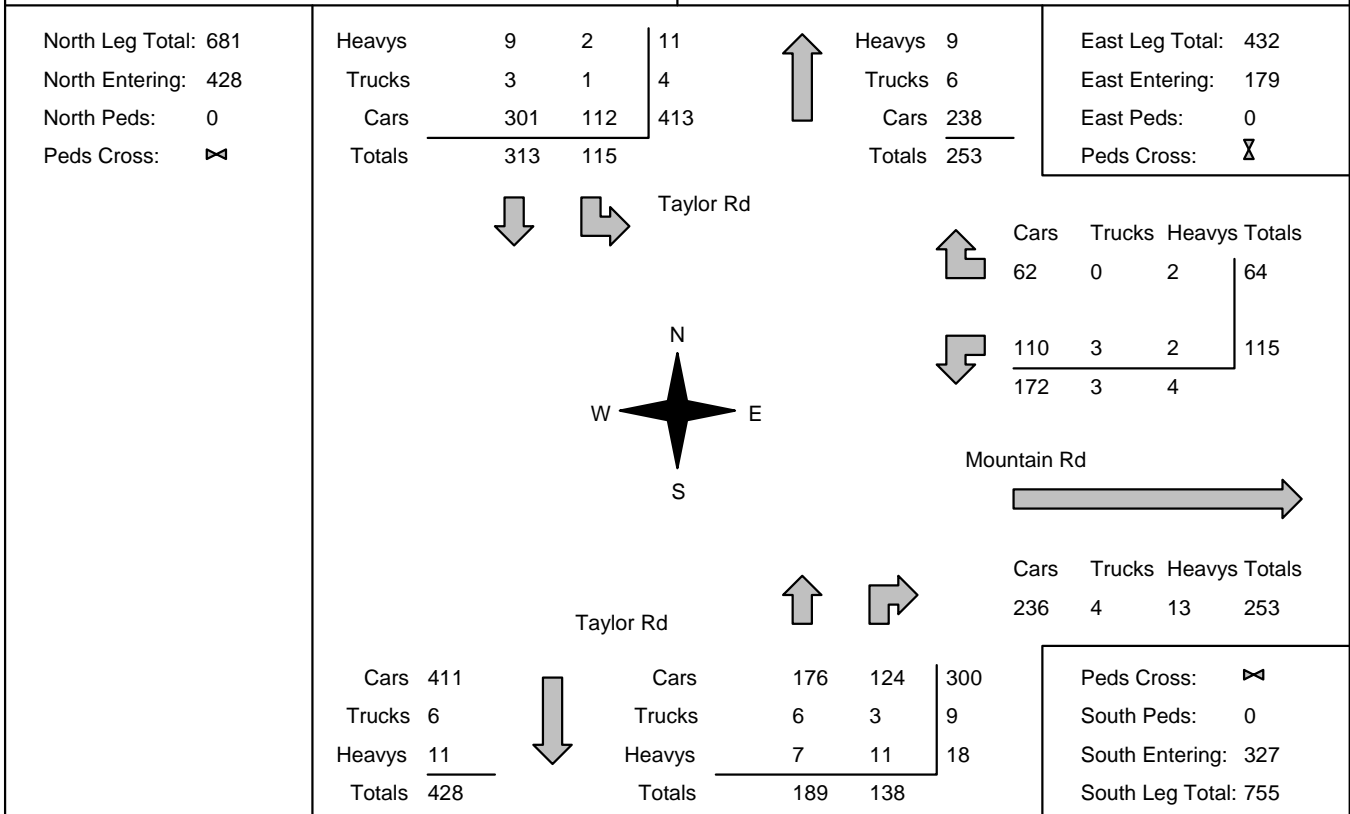
Morning Peak Diagram	Specified Period From: 7:00:00 To: 9:00:00	One Hour Peak From: 7:45:00 To: 8:45:00
Municipality: Thorold Site #: 2500400003 Intersection: Taylor Rd & Mountain Rd TFR File #: 1 Count date: 15-Jan-25	Weather conditions: Person counted: Person prepared: Person checked:	
** Signalized Intersection **	Major Road: Taylor Rd runs N/S	

North Leg Total: 506 North Entering: 176 North Peds: 0 Peds Cross: ☒	<table style="margin: auto;"> <tr> <td style="padding: 5px;">Heavys</td> <td style="padding: 5px;">14</td> <td style="padding: 5px;">2</td> <td style="padding: 5px;">16</td> <td style="padding: 5px; vertical-align: middle;">↑</td> <td style="padding: 5px;">Heavys</td> <td style="padding: 5px;">22</td> <td colspan="2"></td> </tr> <tr> <td style="padding: 5px;">Trucks</td> <td style="padding: 5px;">6</td> <td style="padding: 5px;">1</td> <td style="padding: 5px;">7</td> <td></td> <td style="padding: 5px;">Trucks</td> <td style="padding: 5px;">6</td> <td colspan="2"></td> </tr> <tr> <td style="padding: 5px;">Cars</td> <td style="padding: 5px;">117</td> <td style="padding: 5px;">36</td> <td style="padding: 5px;">153</td> <td></td> <td style="padding: 5px;">Cars</td> <td style="padding: 5px;">302</td> <td colspan="2"></td> </tr> <tr> <td style="padding: 5px;">Totals</td> <td style="padding: 5px;">137</td> <td style="padding: 5px;">39</td> <td></td> <td></td> <td style="padding: 5px;">Totals</td> <td style="padding: 5px;">330</td> <td colspan="2"></td> </tr> </table> <p style="text-align: center;">Taylor Rd</p>  <p style="text-align: center;">Taylor Rd</p> <table style="margin: auto;"> <tr> <td style="padding: 5px;">Cars</td> <td style="padding: 5px;">279</td> <td style="padding: 5px;">224</td> <td style="padding: 5px;">79</td> <td style="padding: 5px;">303</td> <td colspan="2"></td> </tr> <tr> <td style="padding: 5px;">Trucks</td> <td style="padding: 5px;">8</td> <td style="padding: 5px;">6</td> <td style="padding: 5px;">2</td> <td style="padding: 5px;">8</td> <td colspan="2"></td> </tr> <tr> <td style="padding: 5px;">Heavys</td> <td style="padding: 5px;">20</td> <td style="padding: 5px;">19</td> <td style="padding: 5px;">8</td> <td style="padding: 5px;">27</td> <td colspan="2"></td> </tr> <tr> <td style="padding: 5px;">Totals</td> <td style="padding: 5px;">307</td> <td style="padding: 5px;">249</td> <td style="padding: 5px;">89</td> <td></td> <td colspan="2"></td> </tr> </table>	Heavys	14	2	16	↑	Heavys	22			Trucks	6	1	7		Trucks	6			Cars	117	36	153		Cars	302			Totals	137	39			Totals	330			Cars	279	224	79	303			Trucks	8	6	2	8			Heavys	20	19	8	27			Totals	307	249	89				<table style="margin: auto;"> <tr> <td style="padding: 5px;">East Leg Total:</td> <td style="padding: 5px;">379</td> </tr> <tr> <td style="padding: 5px;">East Entering:</td> <td style="padding: 5px;">251</td> </tr> <tr> <td style="padding: 5px;">East Peds:</td> <td style="padding: 5px;">0</td> </tr> <tr> <td style="padding: 5px;">Peds Cross:</td> <td style="padding: 5px;">☒</td> </tr> </table> <table style="margin: auto;"> <tr> <td style="padding: 5px;">Cars</td> <td style="padding: 5px;">78</td> <td style="padding: 5px;">0</td> <td style="padding: 5px;">3</td> <td style="padding: 5px;">81</td> </tr> <tr> <td style="padding: 5px;">Trucks</td> <td style="padding: 5px;">162</td> <td style="padding: 5px;">2</td> <td style="padding: 5px;">6</td> <td style="padding: 5px;">170</td> </tr> <tr> <td style="padding: 5px;">Heavys</td> <td style="padding: 5px;">240</td> <td style="padding: 5px;">2</td> <td style="padding: 5px;">9</td> <td></td> </tr> </table> <p style="text-align: center;">Mountain Rd</p> <table style="margin: auto;"> <tr> <td style="padding: 5px;">Cars</td> <td style="padding: 5px;">115</td> <td style="padding: 5px;">3</td> <td style="padding: 5px;">10</td> <td style="padding: 5px;">128</td> </tr> </table>	East Leg Total:	379	East Entering:	251	East Peds:	0	Peds Cross:	☒	Cars	78	0	3	81	Trucks	162	2	6	170	Heavys	240	2	9		Cars	115	3	10	128
Heavys	14	2	16	↑	Heavys	22																																																																																								
Trucks	6	1	7		Trucks	6																																																																																								
Cars	117	36	153		Cars	302																																																																																								
Totals	137	39			Totals	330																																																																																								
Cars	279	224	79	303																																																																																										
Trucks	8	6	2	8																																																																																										
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Cars	78	0	3	81																																																																																										
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<table style="margin: auto;"> <tr> <td style="padding: 5px;">Peds Cross:</td> <td style="padding: 5px;">☒</td> </tr> <tr> <td style="padding: 5px;">South Peds:</td> <td style="padding: 5px;">0</td> </tr> <tr> <td style="padding: 5px;">South Entering:</td> <td style="padding: 5px;">338</td> </tr> <tr> <td style="padding: 5px;">South Leg Total:</td> <td style="padding: 5px;">645</td> </tr> </table>			Peds Cross:	☒	South Peds:	0	South Entering:	338	South Leg Total:	645																																																																																				
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South Peds:	0																																																																																													
South Entering:	338																																																																																													
South Leg Total:	645																																																																																													

Comments

Accu-Traffic Inc.

Afternoon Peak Diagram	Specified Period From: 16:00:00 To: 18:00:00	One Hour Peak From: 16:00:00 To: 17:00:00
Municipality: Thorold Site #: 2500400003 Intersection: Taylor Rd & Mountain Rd TFR File #: 1 Count date: 15-Jan-25	Weather conditions: Person counted: Person prepared: Person checked:	
** Signalized Intersection **		Major Road: Taylor Rd runs N/S



Comments

Accu-Traffic Inc.

Total Count Diagram

Municipality: Thorold
Site #: 2500400003
Intersection: Taylor Rd & Mountain Rd
TFR File #: 1
Count date: 15-Jan-25

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Taylor Rd runs N/S

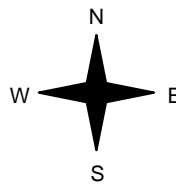
North Leg Total: 2132
 North Entering: 1090
 North Peds: 0
 Peds Cross:

Heavys	34	4	38
Trucks	18	3	21
Cars	750	281	1031
Totals	802	288	



Heavys	45
Trucks	24
Cars	973
Totals	1042

East Leg Total: 1429
 East Entering: 757
 East Peds: 0
 Peds Cross:



	Cars	Trucks	Heavys	Totals
Northbound	247	1	5	253
Southbound	467	13	24	504
Totals	714	14	29	



Cars	1217
Trucks	31
Heavys	58
Totals	1306



Cars	726	352	1078
Trucks	23	9	32
Heavys	40	23	63
Totals	789	384	

Cars	Trucks	Heavys	Totals
633	12	27	672

Peds Cross:
 South Peds: 0
 South Entering: 1173
 South Leg Total: 2479

Comments



Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Traffic Count Summary

Intersection: Taylor Rd & Mountain Rd Count Date: 15-Jan-25 Municipality: Thorold

North Approach Totals						North/South Total Approaches	South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	24	93	0	117	0	383	8:00:00	0	201	65	266	0
9:00:00	44	147	0	191	0	519	9:00:00	0	241	87	328	0
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	115	313	0	428	0	755	17:00:00	0	189	138	327	0
18:00:00	105	249	0	354	0	606	18:00:00	0	158	94	252	0
Totals:	288	802	0	1090	0	2263	S Totals:	0	789	384	1173	0
East Approach Totals						East/West Total Approaches	West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	125	0	57	182	0	182	8:00:00	0	0	0	0	0
9:00:00	171	0	71	242	0	242	9:00:00	0	0	0	0	0
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	115	0	64	179	0	179	17:00:00	0	0	0	0	0
18:00:00	93	0	61	154	0	154	18:00:00	0	0	0	0	0
Totals:	504	0	253	757	0	757	W Totals:	0	0	0	0	0
Calculated Values for Traffic Crossing Major Street												
Hours Ending:	7:00	8:00	9:00	16:00				17:00	18:00	0:00	0:00	
Crossing Values:	0	125	171	0				115	93	0	0	

TMCs - Aggregate, Landfill, Other Heavy Vehicles (Excluding Buses)

Notes:

"Car" = Garbage transport Heavy Vehicle

"Truck" = Aggregate/quarry materials transport heavy vehicle


"Heavy" = All other heavy vehicles not including buses

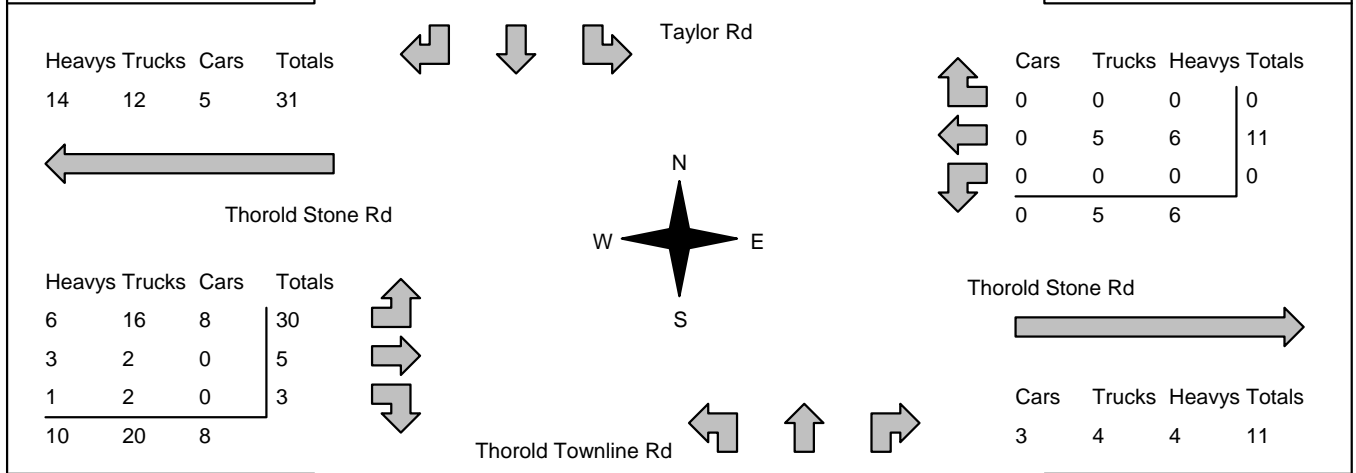
Accu-Traffic Inc.


Morning Peak Diagram	Specified Period From: 7:00:00 To: 9:00:00	One Hour Peak From: 7:45:00 To: 8:45:00
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Municipality: Thorold Site #: 2500400001 Intersection: Thorold Stone Rd & Taylor Rd TFR File #: 1 Count date: 15-Jan-25	Weather conditions: Person counted: Person prepared: Person checked:
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** Signalized Intersection **	Major Road: Thorold Stone Rd runs W/E
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North Leg Total: 70 North Entering: 31 North Peds: 0 Peds Cross: ☒	<table style="border-collapse: collapse;"> <tr><td>Heavys</td><td>8</td><td>1</td><td>1</td><td style="border-left: 1px solid black;">10</td></tr> <tr><td>Trucks</td><td>6</td><td>5</td><td>2</td><td style="border-left: 1px solid black;">13</td></tr> <tr><td>Cars</td><td>5</td><td>1</td><td>2</td><td style="border-left: 1px solid black;">8</td></tr> <tr><td>Totals</td><td>19</td><td>7</td><td>5</td><td style="border-left: 1px solid black;"></td></tr> </table>	Heavys	8	1	1	10	Trucks	6	5	2	13	Cars	5	1	2	8	Totals	19	7	5			<table style="border-collapse: collapse;"> <tr><td>Heavys</td><td>8</td></tr> <tr><td>Trucks</td><td>20</td></tr> <tr><td>Cars</td><td>11</td></tr> <tr><td>Totals</td><td style="border-top: 1px solid black;">39</td></tr> </table>	Heavys	8	Trucks	20	Cars	11	Totals	39	East Leg Total: 22 East Entering: 11 East Peds: 0 Peds Cross: ☒
Heavys	8	1	1	10																												
Trucks	6	5	2	13																												
Cars	5	1	2	8																												
Totals	19	7	5																													
Heavys	8																															
Trucks	20																															
Cars	11																															
Totals	39																															



Peds Cross: ☒ West Peds: 0 West Entering: 38 West Leg Total: 69	<table style="border-collapse: collapse;"> <tr><td>Cars</td><td>1</td></tr> <tr><td>Trucks</td><td>7</td></tr> <tr><td>Heavys</td><td>2</td></tr> <tr><td>Totals</td><td style="border-top: 1px solid black;">10</td></tr> </table>	Cars	1	Trucks	7	Heavys	2	Totals	10		<table style="border-collapse: collapse;"> <tr><td>Cars</td><td>0</td><td>3</td><td>1</td><td style="border-left: 1px solid black;">4</td></tr> <tr><td>Trucks</td><td>1</td><td>4</td><td>0</td><td style="border-left: 1px solid black;">5</td></tr> <tr><td>Heavys</td><td>0</td><td>2</td><td>0</td><td style="border-left: 1px solid black;">2</td></tr> <tr><td>Totals</td><td>1</td><td>9</td><td>1</td><td style="border-left: 1px solid black;"></td></tr> </table>	Cars	0	3	1	4	Trucks	1	4	0	5	Heavys	0	2	0	2	Totals	1	9	1		Peds Cross: ☒ South Peds: 0 South Entering: 11 South Leg Total: 21
Cars	1																															
Trucks	7																															
Heavys	2																															
Totals	10																															
Cars	0	3	1	4																												
Trucks	1	4	0	5																												
Heavys	0	2	0	2																												
Totals	1	9	1																													

Comments


Car = Garbage Transport Heavy Vehicle
 Truck = Aggregate/quarry materials Heavy Vehicle

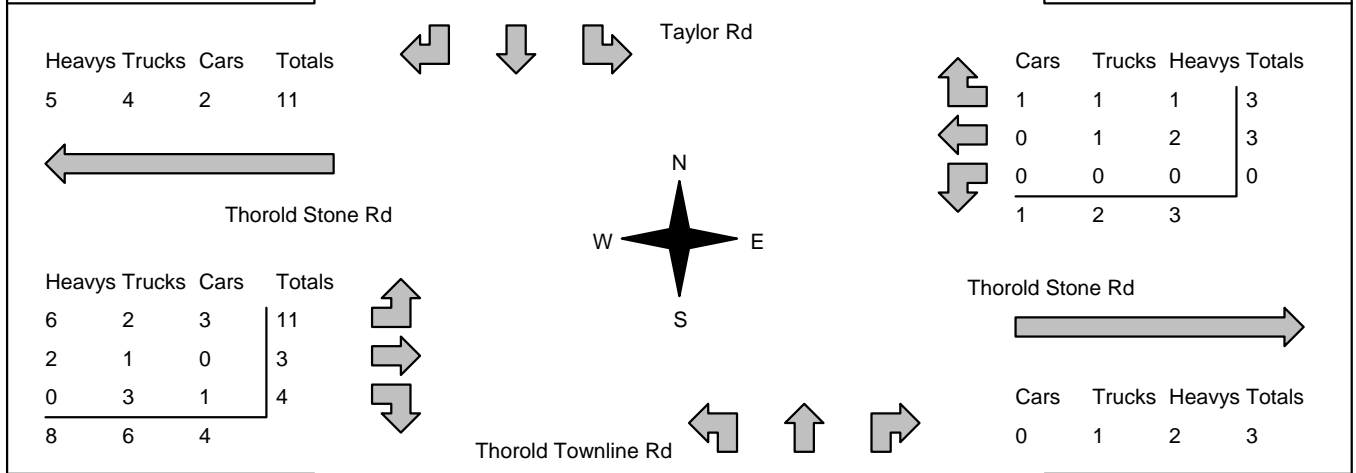
Accu-Traffic Inc.

Afternoon Peak Diagram	Specified Period From: 16:00:00 To: 18:00:00	One Hour Peak From: 16:00:00 To: 17:00:00
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Municipality: Thorold Site #: 2500400001 Intersection: Thorold Stone Rd & Taylor Rd TFR File #: 1 Count date: 15-Jan-25	Weather conditions: Person counted: Person prepared: Person checked:
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** Signalized Intersection **	Major Road: Thorold Stone Rd runs W/E
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North Leg Total: 27 North Entering: 10 North Peds: 0 Peds Cross: ☒	<table style="border-collapse: collapse;"> <tr><td>Heavys</td><td>3</td><td>1</td><td>0</td><td style="border-left: 1px solid black;">4</td></tr> <tr><td>Trucks</td><td>1</td><td>3</td><td>0</td><td style="border-left: 1px solid black;">4</td></tr> <tr><td>Cars</td><td>2</td><td>0</td><td>0</td><td style="border-left: 1px solid black;">2</td></tr> <tr><td>Totals</td><td>6</td><td>4</td><td>0</td><td style="border-left: 1px solid black;"></td></tr> </table>	Heavys	3	1	0	4	Trucks	1	3	0	4	Cars	2	0	0	2	Totals	6	4	0			<table style="border-collapse: collapse;"> <tr><td>Heavys</td><td>7</td></tr> <tr><td>Trucks</td><td>6</td></tr> <tr><td>Cars</td><td>4</td></tr> <tr><td>Totals</td><td style="border-top: 1px solid black;">17</td></tr> </table>	Heavys	7	Trucks	6	Cars	4	Totals	17	East Leg Total: 9 East Entering: 6 East Peds: 0 Peds Cross: ☒
Heavys	3	1	0	4																												
Trucks	1	3	0	4																												
Cars	2	0	0	2																												
Totals	6	4	0																													
Heavys	7																															
Trucks	6																															
Cars	4																															
Totals	17																															



Peds Cross: ☒ West Peds: 0 West Entering: 18 West Leg Total: 29	<table style="border-collapse: collapse;"> <tr><td>Cars</td><td>1</td></tr> <tr><td>Trucks</td><td>6</td></tr> <tr><td>Heavys</td><td>1</td></tr> <tr><td>Totals</td><td style="border-top: 1px solid black;">8</td></tr> </table>	Cars	1	Trucks	6	Heavys	1	Totals	8	<table style="border-collapse: collapse;"> <tr><td>Cars</td><td>0</td><td>0</td><td>0</td><td style="border-left: 1px solid black;">0</td></tr> <tr><td>Trucks</td><td>2</td><td>3</td><td>0</td><td style="border-left: 1px solid black;">5</td></tr> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td style="border-left: 1px solid black;">0</td></tr> <tr><td>Totals</td><td>2</td><td>3</td><td>0</td><td style="border-left: 1px solid black;">5</td></tr> </table>	Cars	0	0	0	0	Trucks	2	3	0	5	Heavys	0	0	0	0	Totals	2	3	0	5	Peds Cross: ☒ South Peds: 0 South Entering: 5 South Leg Total: 13
Cars	1																														
Trucks	6																														
Heavys	1																														
Totals	8																														
Cars	0	0	0	0																											
Trucks	2	3	0	5																											
Heavys	0	0	0	0																											
Totals	2	3	0	5																											

Comments

Car = Garbage Transport Heavy Vehicle
 Truck = Aggregate/quarry materials Heavy Vehicle

Accu-Traffic Inc.

Total Count Diagram

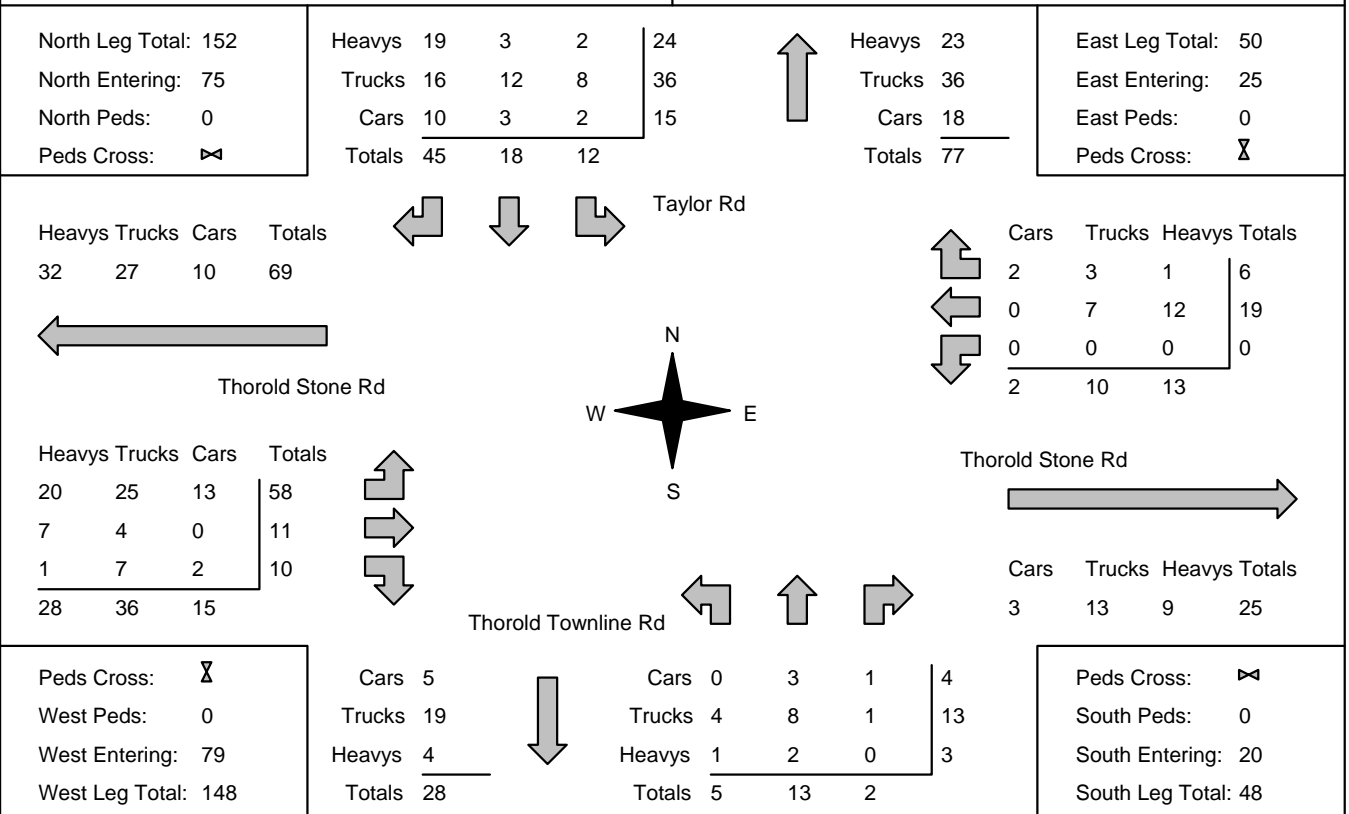
Municipality: Thorold
Site #: 2500400001
Intersection: Thorold Stone Rd & Taylor Rd
TFR File #: 1
Count date: 15-Jan-25

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Thorold Stone Rd runs W/E



Comments

Car = Garbage Transport Heavy Vehicle
 Truck = Aggregate/quarry materials Heavy Vehicle



Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Traffic Count Summary

Intersection: Thorold Stone Rd & Taylor Rd Count Date: 15-Jan-25 Municipality: Thorold

North Approach Totals						North/South Total Approaches	South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	6	8	15	29	0	35	8:00:00	0	5	1	6	0
9:00:00	6	5	22	33	0	42	9:00:00	3	5	1	9	0
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	0	4	6	10	0	15	17:00:00	2	3	0	5	0
18:00:00	0	1	2	3	0	3	18:00:00	0	0	0	0	0
Totals:	12	18	45	75	0	95	S Totals:	5	13	2	20	0
East Approach Totals						East/West Total Approaches	West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	0	3	2	5	0	35	8:00:00	23	4	3	30	0
9:00:00	0	11	0	11	0	37	9:00:00	20	3	3	26	0
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	0	3	3	6	0	24	17:00:00	11	3	4	18	0
18:00:00	0	2	1	3	0	8	18:00:00	4	1	0	5	0
Totals:	0	19	6	25	0	104	W Totals:	58	11	10	79	0
Calculated Values for Traffic Crossing Major Street												
Hours Ending:	7:00	8:00	9:00	16:00			17:00	18:00	0:00	0:00		
Crossing Values:	0	14	14	0			6	1	0	0		



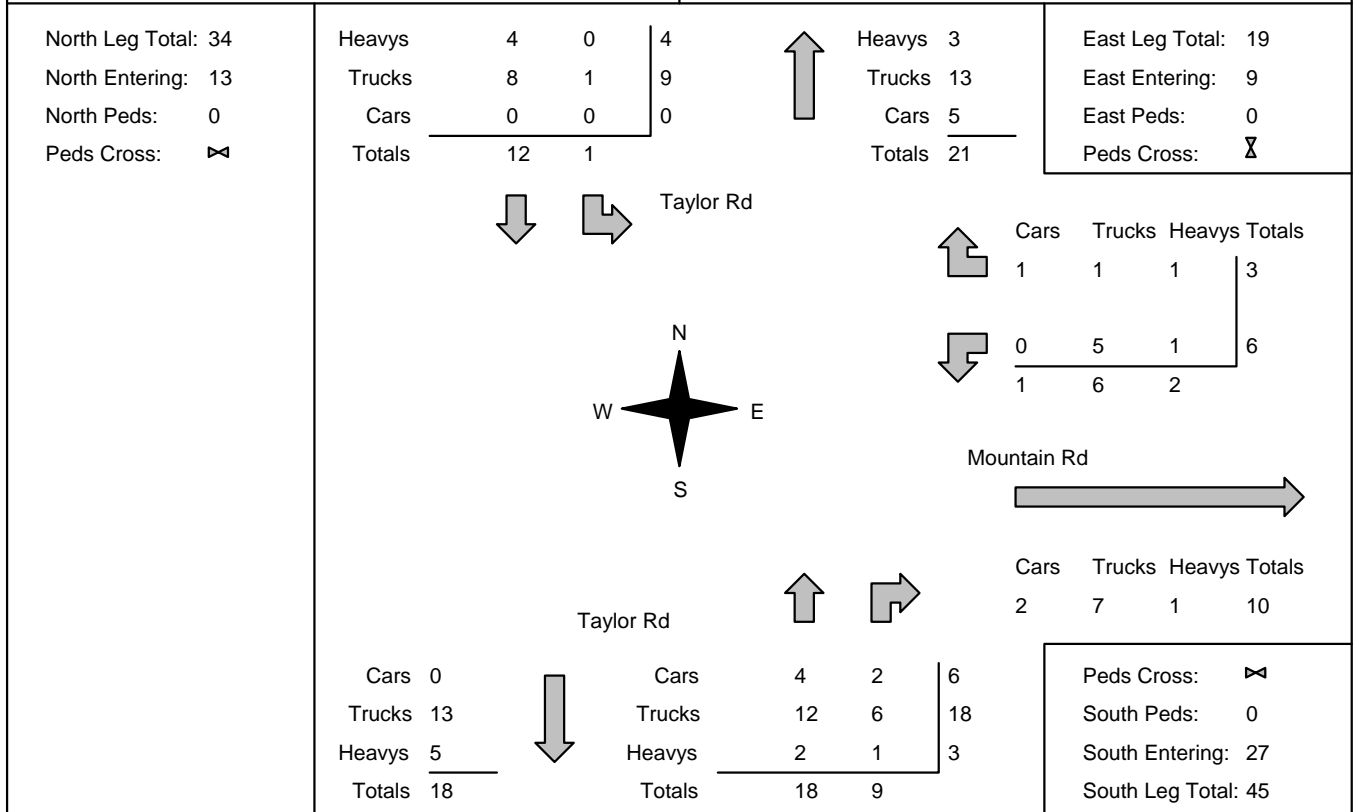
Accu-Traffic Inc.

Count Date: 15-Jan-25 Site #: 2500400001

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Heavys - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15:00	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	
7:30:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
7:45:00	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	
8:00:00	0	0	2	2	0	0	0	0	3	2	1	0	0	0	0	0	0	0	0	
8:15:00	0	0	3	1	0	0	0	0	4	1	1	0	0	0	0	0	0	0	0	
8:30:00	0	0	3	0	0	0	0	0	4	0	1	0	0	0	0	0	0	0	0	
8:45:00	0	0	3	0	1	1	1	1	5	1	1	0	0	0	2	2	0	0	0	
9:00:00	0	0	3	0	1	0	2	1	5	0	1	0	1	1	2	0	0	0	0	
9:15:00	0	0	3	0	1	0	2	0	5	0	1	0	1	0	2	0	0	0	0	
16:00:00	0	0	3	0	1	0	2	0	5	0	1	0	1	0	2	0	0	0	0	
16:15:00	0	0	3	0	1	0	4	2	5	0	1	0	1	0	2	0	0	0	0	
16:30:00	0	0	3	0	1	0	4	0	5	0	1	0	1	0	2	0	0	0	0	
16:45:00	0	0	3	0	1	0	4	0	7	2	1	0	1	0	2	0	0	0	0	
17:00:00	0	0	3	0	1	0	4	0	8	1	1	0	1	0	2	0	0	0	0	
17:15:00	0	0	3	0	1	0	4	0	8	0	1	0	1	0	2	0	0	0	0	
17:30:00	0	0	3	0	1	0	4	0	8	0	1	0	1	0	2	0	0	0	0	
17:45:00	0	0	3	0	1	0	4	0	8	0	1	0	1	0	2	0	0	0	0	
18:00:00	0	0	3	0	1	0	4	0	8	0	1	0	1	0	2	0	0	0	0	
18:15:00	0	0	3	0	1	0	4	0	8	0	1	0	1	0	2	0	0	0	0	
18:15:15	0	0	3	0	1	0	4	0	8	0	1	0	1	0	2	0	0	0	0	

Accu-Traffic Inc.

Morning Peak Diagram	Specified Period From: 7:00:00 To: 9:00:00	One Hour Peak From: 7:45:00 To: 8:45:00
Municipality: Thorold Site #: 2500400003 Intersection: Taylor Rd & Mountain Rd TFR File #: 1 Count date: 15-Jan-25	Weather conditions: Person counted: Person prepared: Person checked:	
** Signalized Intersection **	Major Road: Taylor Rd runs N/S	

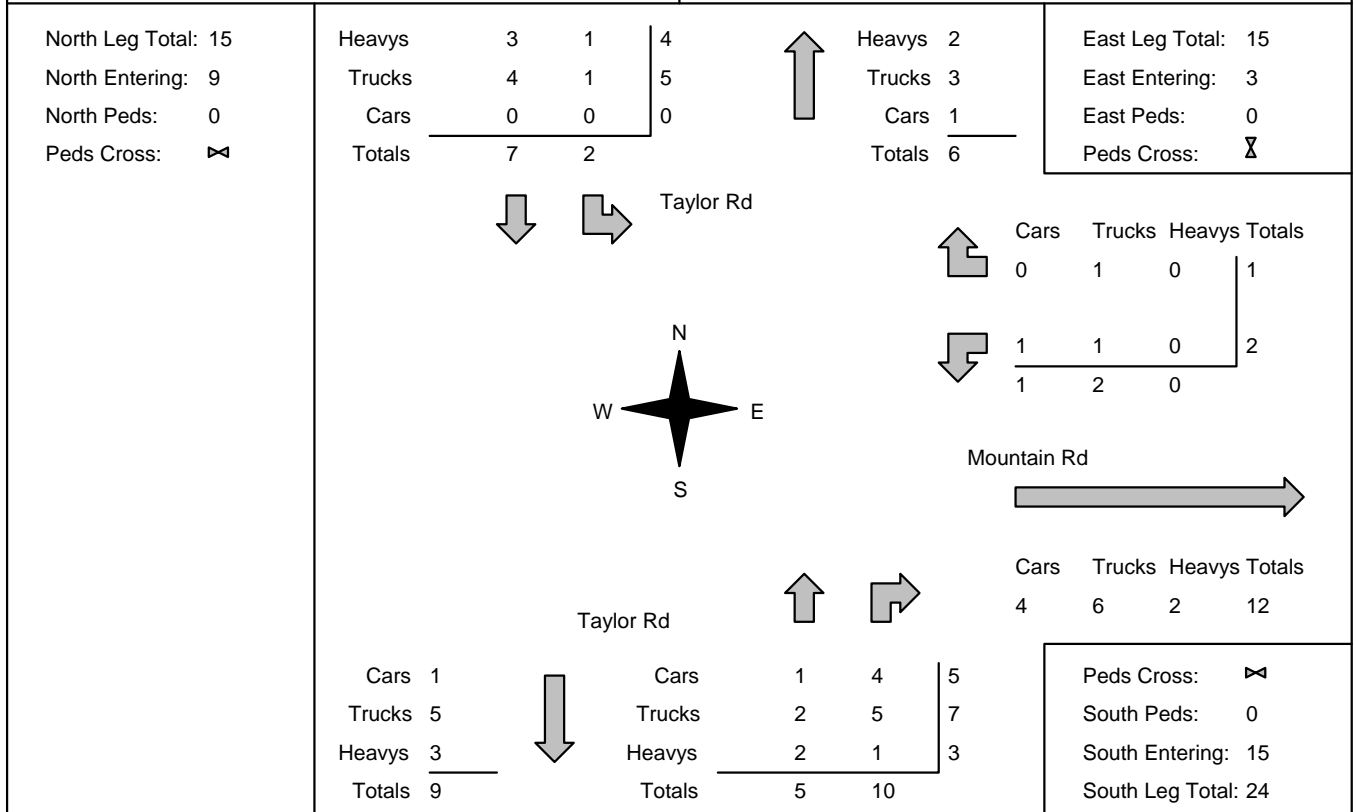


Comments

Car = Garbage Transport Heavy Vehicle
 Truck = Aggregate/quarry materials Heavy Vehicle

Accu-Traffic Inc.

Afternoon Peak Diagram	Specified Period From: 16:00:00 To: 18:00:00	One Hour Peak From: 16:00:00 To: 17:00:00
Municipality: Thorold Site #: 2500400003 Intersection: Taylor Rd & Mountain Rd TFR File #: 1 Count date: 15-Jan-25	Weather conditions: Person counted: Person prepared: Person checked:	
** Signalized Intersection **	Major Road: Taylor Rd runs N/S	



Accu-Traffic Inc.

Total Count Diagram

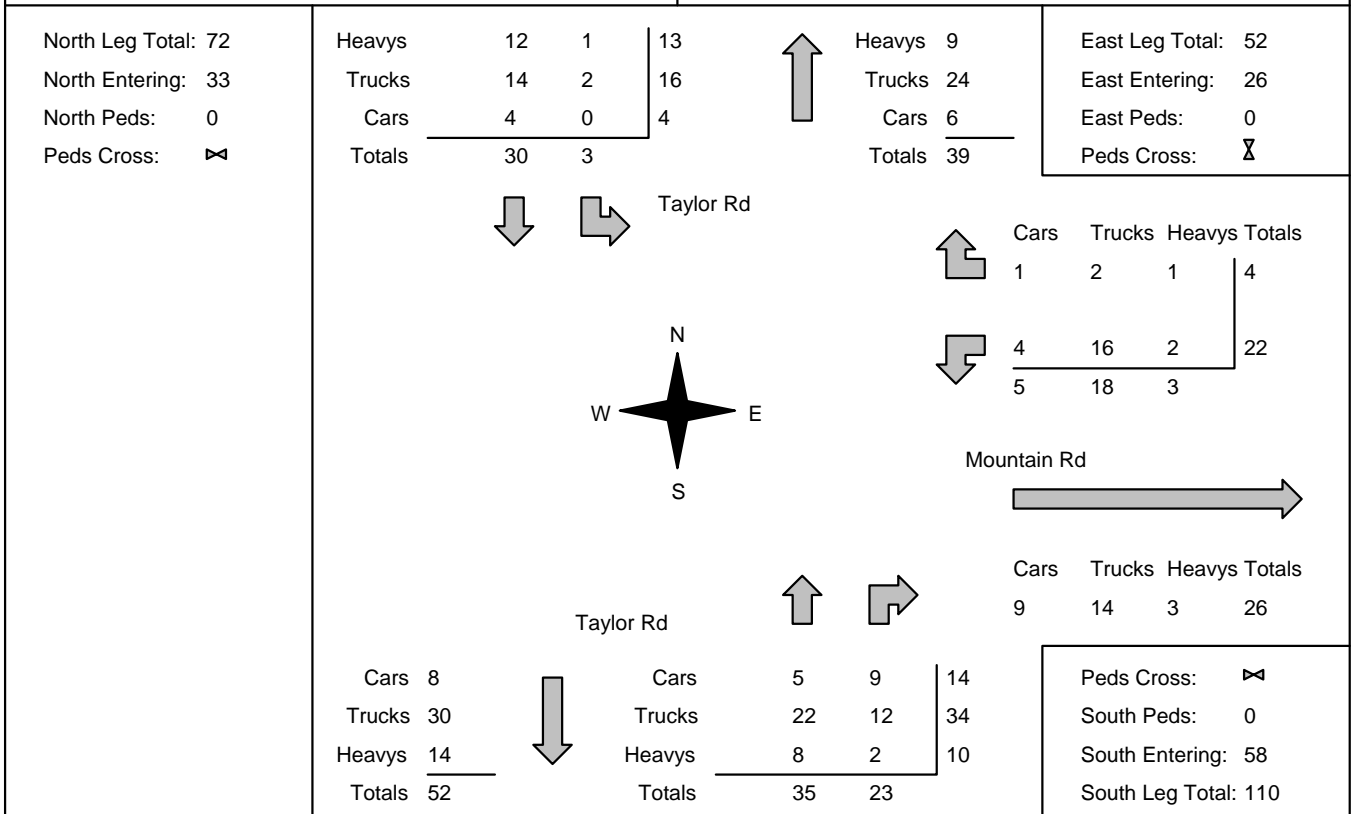
Municipality: Thorold
Site #: 2500400003
Intersection: Taylor Rd & Mountain Rd
TFR File #: 1
Count date: 15-Jan-25

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Taylor Rd runs N/S



Comments

Car = Garbage Transport Heavy Vehicle
 Truck = Aggregate/quarry materials Heavy Vehicle



Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

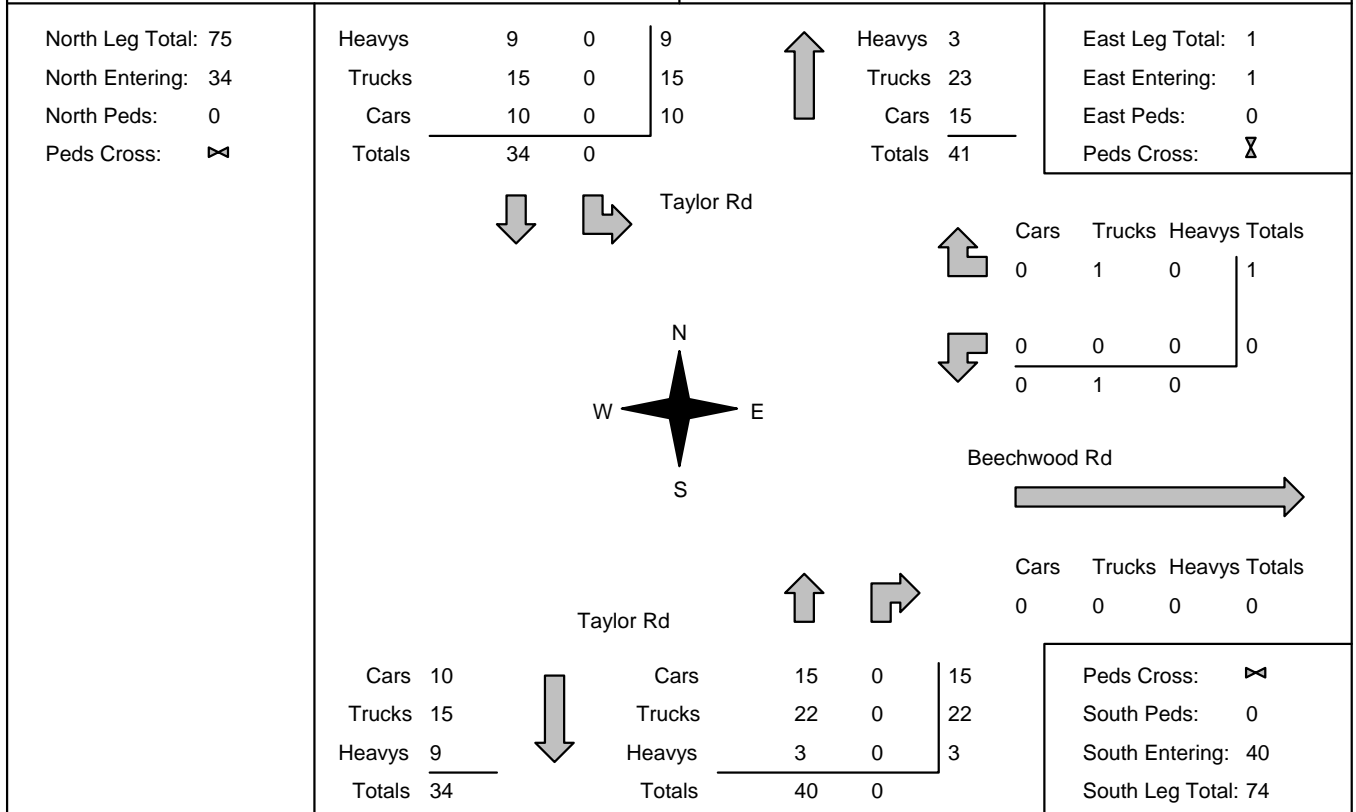
Accu-Traffic Inc. Traffic Count Summary

Intersection: Taylor Rd & Mountain Rd Count Date: 15-Jan-25 Municipality: Thorold

North Approach Totals						North/South Total Approaches	South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	0	4	0	4	0	20	8:00:00	0	10	6	16	0
9:00:00	1	16	0	17	0	40	9:00:00	0	18	5	23	0
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	2	7	0	9	0	24	17:00:00	0	5	10	15	0
18:00:00	0	3	0	3	0	7	18:00:00	0	2	2	4	0
Totals:	3	30	0	33	0	91	S Totals:	0	35	23	58	0
East Approach Totals						East/West Total Approaches	West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	13	0	1	14	0	14	8:00:00	0	0	0	0	0
9:00:00	6	0	2	8	0	8	9:00:00	0	0	0	0	0
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	2	0	1	3	0	3	17:00:00	0	0	0	0	0
18:00:00	1	0	0	1	0	1	18:00:00	0	0	0	0	0
Totals:	22	0	4	26	0	26	W Totals:	0	0	0	0	0
Calculated Values for Traffic Crossing Major Street												
Hours Ending:	7:00	8:00	9:00	16:00			17:00	18:00	0:00	0:00		
Crossing Values:	0	13	6	0			2	1	0	0		

Accu-Traffic Inc.

Morning Peak Diagram	Specified Period From: 7:00:00 To: 9:00:00	One Hour Peak From: 7:45:00 To: 8:45:00
Municipality: Thorold Site #: 2500400008 Intersection: Taylor Rd & Beechwood Rd TFR File #: 1 Count date: 15-Jan-25	Weather conditions: Person counted: Person prepared: Person checked:	
** Non-Signalized Intersection **	Major Road: Taylor Rd runs N/S	

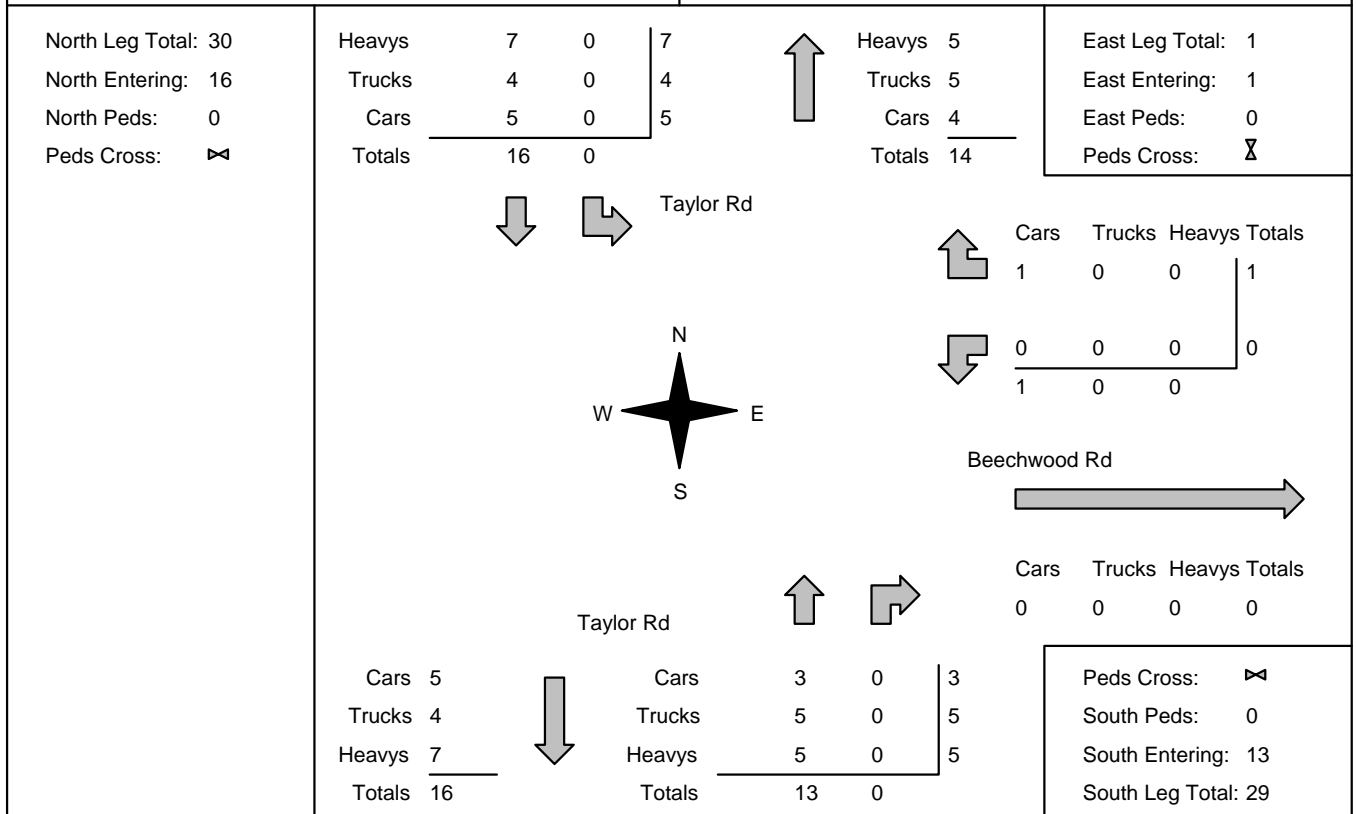


Comments

Car = Garbage Transport Heavy Vehicle
 Truck = Aggregate/quarry materials Heavy Vehicle

Accu-Traffic Inc.

Afternoon Peak Diagram	Specified Period From: 16:00:00 To: 18:00:00	One Hour Peak From: 16:00:00 To: 17:00:00
Municipality: Thorold Site #: 2500400008 Intersection: Taylor Rd & Beechwood Rd TFR File #: 1 Count date: 15-Jan-25	Weather conditions: Person counted: Person prepared: Person checked:	
** Non-Signalized Intersection **	Major Road: Taylor Rd runs N/S	



Comments

Car = Garbage Transport Heavy Vehicle
 Truck = Aggregate/quarry materials Heavy Vehicle

Accu-Traffic Inc.

Total Count Diagram

Municipality: Thorold
Site #: 2500400008
Intersection: Taylor Rd & Beechwood Rd
TFR File #: 1
Count date: 15-Jan-25

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

Major Road: Taylor Rd runs N/S

North Leg Total: 160
 North Entering: 86
 North Peds: 0
 Peds Cross: ∇

Heavys	25	0	25
Trucks	36	0	36
Cars	25	0	25
Totals	86	0	

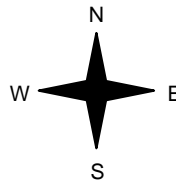


Heavys	16
Trucks	36
Cars	22
Totals	74

East Leg Total: 2
 East Entering: 2
 East Peds: 0
 Peds Cross: ∇



Taylor Rd



	Cars	Trucks	Heavys	Totals
Northbound	1	1	0	2
Southbound	0	0	0	0
Totals	1	1	0	

Beechwood Rd



Cars	Trucks	Heavys	Totals
0	0	0	0

Cars	25
Trucks	36
Heavys	25
Totals	86



Taylor Rd

Cars	21	0	21
Trucks	35	0	35
Heavys	16	0	16
Totals	72	0	

Peds Cross: ∇
 South Peds: 0
 South Entering: 72
 South Leg Total: 158

Comments

Car = Garbage Transport Heavy Vehicle
 Truck = Aggregate/quarry materials Heavy Vehicle



Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Traffic Count Summary

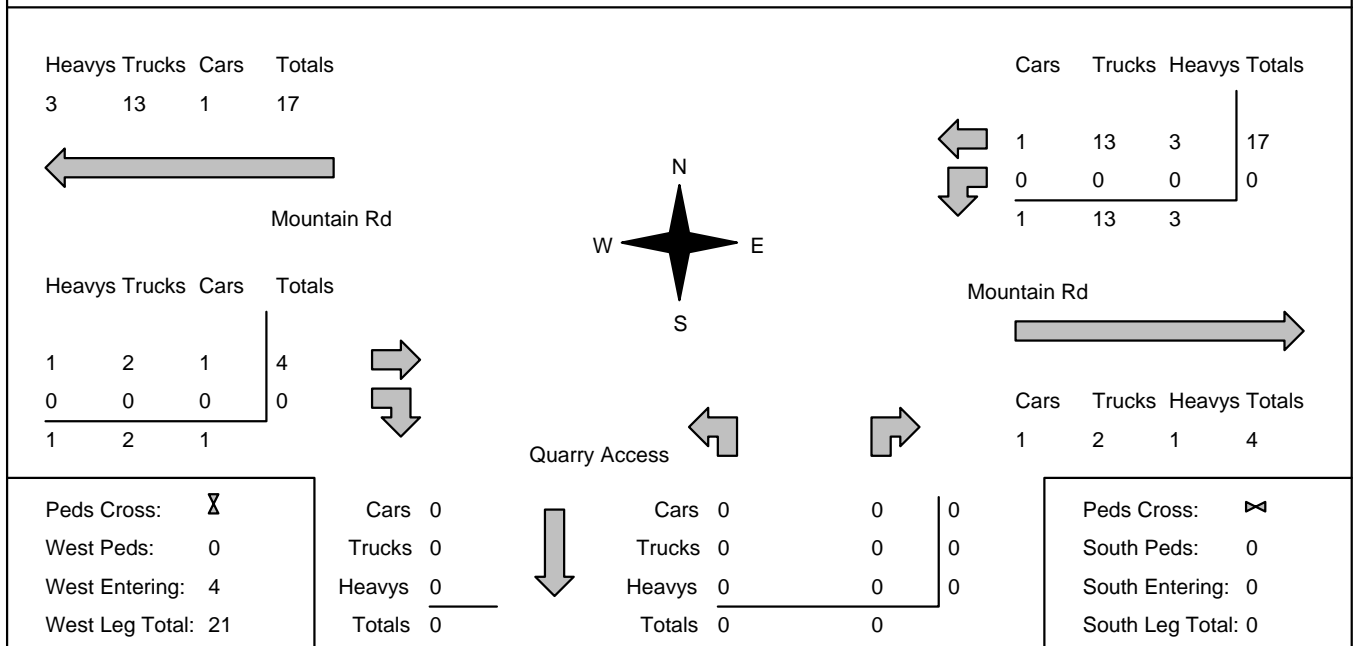
Intersection: Taylor Rd & Beechwood Rd Count Date: 15-Jan-25 Municipality: Thorold

North Approach Totals						North/South Total Approaches	South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	0	28	0	28	0	55	8:00:00	0	27	0	27	0
9:00:00	0	38	0	38	0	67	9:00:00	0	29	0	29	0
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	0	16	0	16	0	29	17:00:00	0	13	0	13	0
18:00:00	0	4	0	4	0	7	18:00:00	0	3	0	3	0
Totals:	0	86	0	86	0	158	S Totals:	0	72	0	72	0
East Approach Totals						East/West Total Approaches	West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	0	0	0	0	0	0	8:00:00	0	0	0	0	0
9:00:00	0	0	1	1	0	1	9:00:00	0	0	0	0	0
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	0	0	1	1	0	1	17:00:00	0	0	0	0	0
18:00:00	0	0	0	0	0	0	18:00:00	0	0	0	0	0
Totals:	0	0	2	2	0	2	W Totals:	0	0	0	0	0
Calculated Values for Traffic Crossing Major Street												
Hours Ending:	7:00	8:00	9:00	16:00			17:00	18:00	0:00	0:00		
Crossing Values:	0	0	0	0			0	0	0	0		

Accu-Traffic Inc.

Morning Peak Diagram	Specified Period From: 7:00:00 To: 9:00:00	One Hour Peak From: 7:00:00 To: 8:00:00
Municipality: Thorold Site #: 2500400011 Intersection: Mountain Rd & Quarry Access TFR File #: 1 Count date: 15-Jan-25	Weather conditions: Person counted: Person prepared: Person checked:	
** Non-Signalized Intersection **	Major Road: Mountain Rd runs W/E	

East Leg Total: 21
East Entering: 17
East Peds: 0
Peds Cross: 8



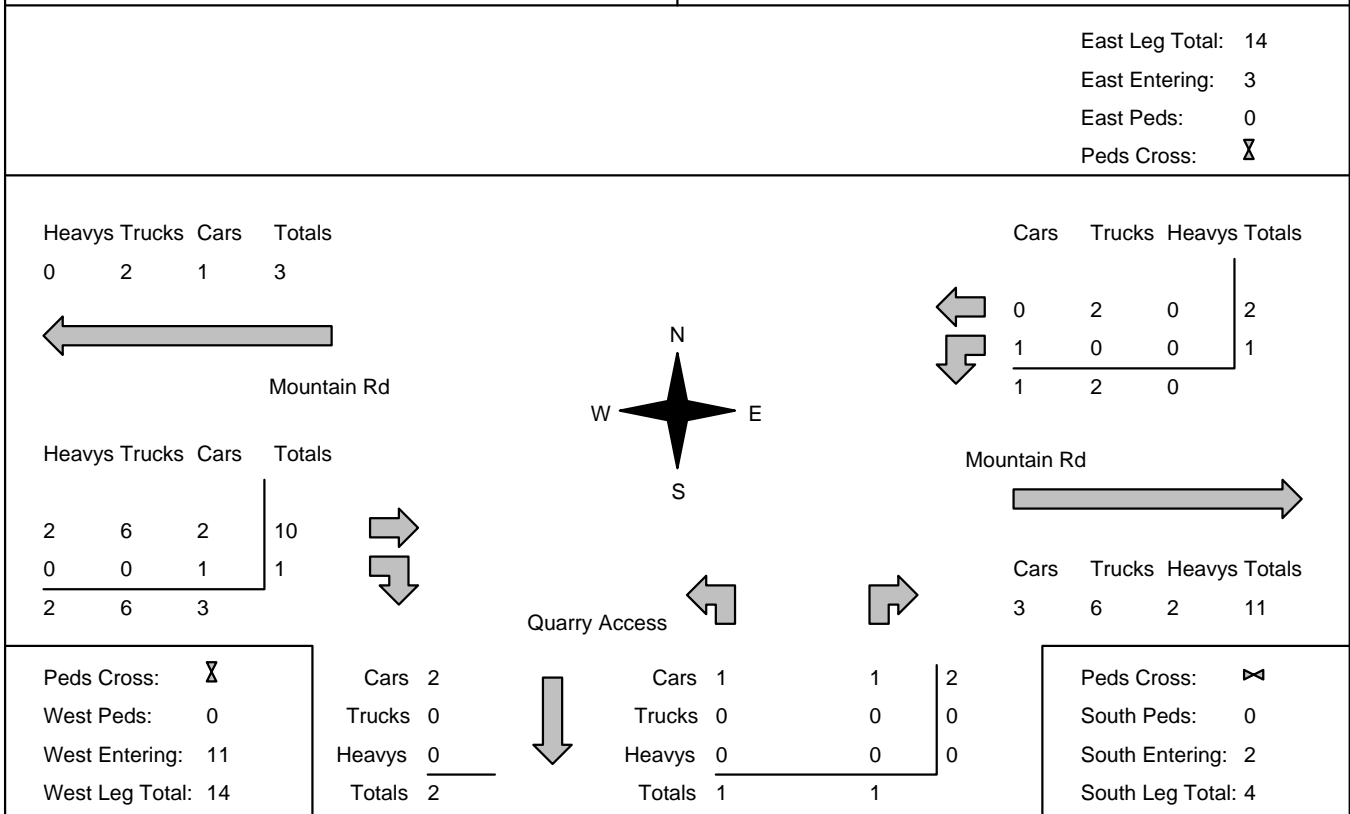
Comments

Car = Garbage Transport Heavy Vehicle
Truck = Aggregate/quarry materials Heavy Vehicle

Accu-Traffic Inc.

Afternoon Peak Diagram	Specified Period From: 16:00:00 To: 18:00:00	One Hour Peak From: 16:00:00 To: 17:00:00
Municipality: Thorold Site #: 2500400011 Intersection: Mountain Rd & Quarry Access TFR File #: 1 Count date: 15-Jan-25	Weather conditions: Person counted: Person prepared: Person checked:	
** Non-Signalized Intersection **	Major Road: Mountain Rd runs W/E	

East Leg Total: 14
 East Entering: 3
 East Peds: 0
 Peds Cross: 8



Comments

Car = Garbage Transport Heavy Vehicle
 Truck = Aggregate/quarry materials Heavy Vehicle

Accu-Traffic Inc.

Total Count Diagram

Municipality: Thorold
Site #: 2500400011
Intersection: Mountain Rd & Quarry Access
TFR File #: 1
Count date: 15-Jan-25

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

Major Road: Mountain Rd runs W/E

East Leg Total: 49
 East Entering: 27
 East Peds: 0
 Peds Cross: 8

Heavys	Trucks	Cars	Totals
4	21	2	27

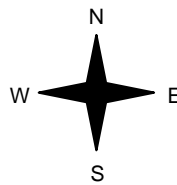


Mountain Rd

Heavys	Trucks	Cars	Totals
3	12	6	21
0	0	1	1
3	12	7	



Quarry Access



Cars	Trucks	Heavys	Totals
1	21	4	26
1	0	0	1
2	21	4	



Mountain Rd

Cars	Trucks	Heavys	Totals
7	12	3	22



Peds Cross: 8
 West Peds: 0
 West Entering: 22
 West Leg Total: 49

Cars	2
Trucks	0
Heavys	0
Totals	2



Cars	1	1	2
Trucks	0	0	0
Heavys	0	0	0
Totals	1	1	

Peds Cross: 8
 South Peds: 0
 South Entering: 2
 South Leg Total: 4

Comments

Car = Garbage Transport Heavy Vehicle
 Truck = Aggregate/quarry materials Heavy Vehicle



Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc. Traffic Count Summary

Intersection: Mountain Rd & Quarry Access Count Date: 15-Jan-25 Municipality: Thorold

North Approach Totals						North/South Total Approaches	South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	0	0	0	0	0	0	8:00:00	0	0	0	0	0
9:00:00	0	0	0	0	0	0	9:00:00	0	0	0	0	0
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	0	0	0	0	0	2	17:00:00	1	0	1	2	0
18:00:00	0	0	0	0	0	0	18:00:00	0	0	0	0	0
Totals:	0	0	0	0	0	2	S Totals:	1	0	1	2	0
East Approach Totals						East/West Total Approaches	West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	0	17	0	17	0	21	8:00:00	0	4	0	4	0
9:00:00	0	6	0	6	0	11	9:00:00	0	5	0	5	0
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	1	2	0	3	0	14	17:00:00	0	10	1	11	0
18:00:00	0	1	0	1	0	3	18:00:00	0	2	0	2	0
Totals:	1	26	0	27	0	49	W Totals:	0	21	1	22	0
Calculated Values for Traffic Crossing Major Street												
Hours Ending:	7:00	8:00	9:00	16:00		17:00	18:00	0:00	0:00			
Crossing Values:	0	0	0	0		1	0	0	0			

Appendix B – Existing Heavy Vehicle Data

Roadway	Traffic Volumes (1h AM peak volumes)							
Taylor Road	Segment(s)							
	Between Thorold Townline Road and Thorold Stone Road		Between Beechwood Road and Thorold Townline Road		Between Walker Landfill East Access and Beechwood Road		Between Mountain Road and Walker Landfill East Access:	
	Aggregates:	33	Aggregates:	36	Aggregates:	38	Aggregates:	31
	Landfill:	19	Landfill:	23	Landfill:	25	Landfill:	6
	All other traffic:	692	All other traffic:	597	All other traffic:	626	All other traffic:	608
Mountain road	Segment(s)							
	Between Taylor Road and Quarry Maintenance Only Access		Between Quarry Maintenance Only Access and Garner Road		East of Garner Road			
	Aggregates:	20	Aggregates:	15 ¹	Aggregates:	15 ¹		
	Landfill:	3	Landfill:	2 ¹	Landfill:	2 ¹		
	All other traffic:	368	All other traffic:	361	All other traffic:	405		
Garner Road	Segment(s)							
	North of Mountain Road		South of Mountain Road					
	Aggregates:	0 ¹	Aggregates:	1 ¹				
	Landfill:	0 ¹	Landfill:	1 ¹				
	All other traffic:	22	All other traffic:	87				
Thorold Stone Road <small>*represents volumes bound for and leaving project site</small>	Segment(s)							
	Between Taylor Road and Beechwood Road		West of Taylor Road		East of Beechwood Road			
	Aggregates:	9 (total), 2*	Aggregates:	32 (total), 22*	Aggregates:	9 (total), 2*		
	Landfill:	4 (total), 2*	Landfill:	13 (total), 13*	Landfill:	3 (total), 2*		
	All other traffic:	1576	All other traffic:	1969	All other traffic:	1579		
Beechwood Road	Segment(s)							
	Between Taylor Road and Thorold Stone Road							
	Aggregates:	1						
	Landfill:	0						
	All other traffic:	39						
Thorold Townline Road	Segment(s)							
	Between Landfill Northwest access intersection and Thorold Public Works Access:		Between Thorold Public Works Access and Old Thorold Stone Road:		Between Old Thorold Stone Road and Taylor Road		North of Landfill Northwest access intersection	
	Aggregates:	4	Aggregates:	4	Aggregates:	6	Aggregates:	4
	Landfill:	1	Landfill:	7	Landfill:	2	Landfill:	0
	All other traffic:	66	All other traffic:	101	All other traffic:	110	All other traffic:	66
Old Thorold Stone Road	Segment(s)							
	West from Thorold Townline Road							
	Aggregates:	12						
	Landfill:	2						
	All other traffic:	68						

¹TMC data collection at the intersection of Mountain Road and Garner Road encountered video footage corruption, preventing the classification of heavy vehicles into Aggregate Hauling or Landfill Bound categories. To address this, the distribution was estimated using the observed percentage of heavy vehicles at this intersection and the proportion of aggregate/landfill trucks at nearby intersections.

Roadway	Traffic Volumes (1h PM peak volumes)							
Taylor Road	Segment(s)							
	Between Thorold Townline Road and Thorold Stone Road		Between Beechwood Road and Thorold Townline Road		Between Walker Landfill East Access and Beechwood Road		Between Mountain Road and Walker Landfill East Access:	
	Aggregates:	11	Aggregates:	9	Aggregates:	13	Aggregates:	8
	Landfill:	6	Landfill:	8	Landfill:	6	Landfill:	3
	All other traffic:	780	All other traffic:	689	All other traffic:	743	All other traffic:	745
Mountain road	Segment(s)							
	Between Taylor Road and Quarry Maintenance Only Access		Between Quarry Maintenance Only Access and Garner Road		East of Garner Road			
	Aggregates:	8	Aggregates:	8 ¹	Aggregates:	8 ¹		
	Landfill:	5	Landfill:	4 ¹	Landfill:	4 ¹		
	All other traffic:	421	All other traffic:	422	All other traffic:	462		
Garner Road	Segment(s)							
	North of Mountain Road		South of Mountain Road					
	Aggregates:	0 ¹	Aggregates:	1 ¹				
	Landfill:	0 ¹	Landfill:	1 ¹				
	All other traffic:	9	All other traffic:	105				
Thorold Stone Road <small>*represents volumes bound for and leaving project site</small>	Segment(s)							
	Between Taylor Road and Beechwood Road		West of Taylor Road		East of Beechwood Road			
	Aggregates:	3 (total), 2*	Aggregates:	10 (total), 3*	Aggregates:	3 (total), 1*		
	Landfill:	1 (total), 1*	Landfill:	6 (total), 5*	Landfill:	2 (total), 1*		
	All other traffic:	1954	All other traffic:	2231	All other traffic:	1932		
Beechwood Road	Segment(s)							
	Between Taylor Road and Thorold Stone Road							
	Aggregates:	1						
	Landfill:	1						
	All other traffic:	57						
Thorold Townline Road	Segment(s)							
	Between Landfill Northwest access intersection and Thorold Public Works Access:		Between Thorold Public Works Access and Old Thorold Stone Road:		Between Old Thorold Stone Road and Taylor Road		North of Landfill Northwest access intersection	
	Aggregates:	3	Aggregates:	3	Aggregates:	2	Aggregates:	0
	Landfill:	3	Landfill:	3	Landfill:	3	Landfill:	0
	All other traffic:	86	All other traffic:	110	All other traffic:	116	All other traffic:	61
Old Thorold Stone Road	Segment(s)							
	West from Thorold Townline Road							
	Aggregates:	2						
	Landfill:	0						
	All other traffic:	73						

¹TMC data collection at the intersection of Mountain Road and Garner Road encountered video footage corruption, preventing the classification of heavy vehicles into Aggregate Hauling or Landfill Bound categories. To address this, the distribution was estimated using the observed percentage of heavy vehicles at this intersection and the proportion of aggregate/landfill trucks at nearby intersections.

Appendix C – Calculated Road Network AADT

Roadway	Average Annual Daily Traffic (AADT) Calculated Values			
Taylor Road	Segment(s)			
Taylor Road	Between Thorold Townline Road and Thorold Stone Road 6164	Between Beechwood Road and Thorold Townline Road 5448	Between Walker Landfill East Access and Beechwood Road 5804	Between Mountain Road and Walker Landfill East Access 5604
	Segment(s)			
Mountain road	Between Taylor Road and Quarry Maintenance Only Access 3300	Between Quarry Maintenance Only Access and Garner Road 3248	East of Garner Road 3584	
	Segment(s)			
Garner Road	North of Mountain Road 124	South of Mountain Road 784		
	Segment(s)			
Thorold Stone Road	Between Taylor Road and Beechwood Road 14188	West of Taylor Road 17044	East of Beechwood Road 14112	
	Segment(s)			
Beechwood Road	Between Taylor Road and Thorold 396			
	Segment(s)			
Thorold Townline Road	Between Landfill Northwest access intersection and Thorold 652	Between Thorold Public Works Access and Old 912	Between Old Thorold Stone Road and Taylor Road 956	North of Landfill Northwest access intersection 524
	Segment(s)			
Old Thorold Stone Road	West from Thorold Townline Road 628			

Appendix D – Existing Conditions Traffic Analysis Synchro Report

Lanes, Volumes, Timings

Existing Conditions - AM Peak

1: Thorold Townline Road/Taylor Road & Thorold Stone Road

02/05/2025



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	284	648	36	19	802	38	27	118	28	30	67	207
Future Volume (vph)	284	648	36	19	802	38	27	118	28	30	67	207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	95.0		95.0	85.0		90.0	100.0		0.0	80.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	85.0			100.0			90.0			40.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.972			0.887	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1644	3544	1498	1825	3544	1633	1755	1729	0	1521	1546	0
Flt Permitted	0.215			0.384			0.288			0.595		
Satd. Flow (perm)	372	3544	1498	738	3544	1633	532	1729	0	953	1546	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			39			74		16			205	
Link Speed (k/h)		80			80			80			80	
Link Distance (m)		291.4			1007.9			528.0			328.2	
Travel Time (s)		13.1			45.4			23.8			14.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	11%	3%	9%	0%	3%	0%	4%	8%	8%	20%	11%	10%
Adj. Flow (vph)	309	704	39	21	872	41	29	128	30	33	73	225
Shared Lane Traffic (%)												
Lane Group Flow (vph)	309	704	39	21	872	41	29	158	0	33	298	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2			6			4			8	

Lanes, Volumes, Timings
 1: Thorold Townline Road/Taylor Road & Thorold Stone Road

Existing Conditions - AM Peak
 02/05/2025

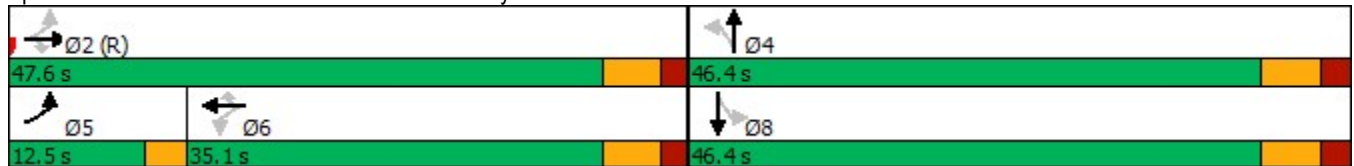


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	4	4		8		
Detector Phase	5	2	2	6	6	6	4	4		8	8	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	12.5	35.1	35.1	35.1	35.1	35.1	46.4	46.4		46.4	46.4	
Total Split (s)	12.5	47.6	47.6	35.1	35.1	35.1	46.4	46.4		46.4	46.4	
Total Split (%)	13.3%	50.6%	50.6%	37.3%	37.3%	37.3%	49.4%	49.4%		49.4%	49.4%	
Maximum Green (s)	9.5	41.5	41.5	29.0	29.0	29.0	40.0	40.0		40.0	40.0	
Yellow Time (s)	3.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1		4.1	4.1	
All-Red Time (s)	0.0	2.0	2.0	2.0	2.0	2.0	2.3	2.3		2.3	2.3	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.0	6.1	6.1	6.1	6.1	6.1	6.4	6.4		6.4	6.4	
Lead/Lag	Lead			Lag			Lag					
Lead-Lag Optimize?	Yes			Yes			Yes					
Vehicle Extension (s)	2.5	6.0	6.0	6.0	6.0	6.0	2.3	2.3		2.3	2.3	
Recall Mode	None	C-Max	C-Max	None	None	None	None	None		None	None	
Walk Time (s)		11.0	11.0	11.0	11.0	11.0	15.0	15.0		15.0	15.0	
Flash Dont Walk (s)		18.0	18.0	18.0	18.0	18.0	25.0	25.0		25.0	25.0	
Pedestrian Calls (#/hr)		0	0	0	0	0	0	0		0	0	
Act Effct Green (s)	70.7	67.6	67.6	41.1	41.1	41.1	13.9	13.9		13.9	13.9	
Actuated g/C Ratio	0.75	0.72	0.72	0.44	0.44	0.44	0.15	0.15		0.15	0.15	
v/c Ratio	0.52	0.28	0.04	0.07	0.56	0.05	0.37	0.59		0.24	0.74	
Control Delay	8.8	5.4	2.0	17.6	22.0	1.8	47.9	41.7		37.4	23.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	8.8	5.4	2.0	17.6	22.0	1.8	47.9	41.7		37.4	23.9	
LOS	A	A	A	B	C	A	D	D		D	C	
Approach Delay		6.3			21.0			42.7			25.2	
Approach LOS		A			C			D			C	

Intersection Summary























Area Type: Other
 Cycle Length: 94
 Actuated Cycle Length: 94
 Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 95
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.74
 Intersection Signal Delay: 17.0
 Intersection LOS: B
 Intersection Capacity Utilization 76.6%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 1: Thorold Townline Road/Taylor Road & Thorold Stone Road



HCM Signalized Intersection Capacity Analysis
 1: Thorold Townline Road/Taylor Road & Thorold Stone Road

Existing Conditions - AM Peak
 02/05/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	284	648	36	19	802	38	27	118	28	30	67	207
Future Volume (vph)	284	648	36	19	802	38	27	118	28	30	67	207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.1	6.1	6.1	6.1	6.1	6.4	6.4		6.4	6.4	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.89	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1644	3544	1498	1825	3544	1633	1755	1728		1521	1545	
Flt Permitted	0.21	1.00	1.00	0.38	1.00	1.00	0.29	1.00		0.60	1.00	
Satd. Flow (perm)	372	3544	1498	738	3544	1633	532	1728		953	1545	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	309	704	39	21	872	41	29	128	30	33	73	225
RTOR Reduction (vph)	0	0	11	0	0	23	0	14	0	0	175	0
Lane Group Flow (vph)	309	704	28	21	872	18	29	144	0	33	123	0
Heavy Vehicles (%)	11%	3%	9%	0%	3%	0%	4%	8%	8%	20%	11%	10%
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2			6			4			8	
Permitted Phases	2		2	6		6	4	4		8		
Actuated Green, G (s)	67.6	67.6	67.6	41.1	41.1	41.1	13.9	13.9		13.9	13.9	
Effective Green, g (s)	67.6	67.6	67.6	41.1	41.1	41.1	13.9	13.9		13.9	13.9	
Actuated g/C Ratio	0.72	0.72	0.72	0.44	0.44	0.44	0.15	0.15		0.15	0.15	
Clearance Time (s)	3.0	6.1	6.1	6.1	6.1	6.1	6.4	6.4		6.4	6.4	
Vehicle Extension (s)	2.5	6.0	6.0	6.0	6.0	6.0	2.3	2.3		2.3	2.3	
Lane Grp Cap (vph)	585	2548	1077	322	1549	714	78	255		140	228	
v/s Ratio Prot	c0.13	0.20			c0.25			c0.08			0.08	
v/s Ratio Perm	0.25		0.02	0.03		0.01	0.05			0.03		
v/c Ratio	0.53	0.28	0.03	0.07	0.56	0.03	0.37	0.57		0.24	0.54	
Uniform Delay, d1	7.2	4.6	3.8	15.3	19.7	15.1	36.1	37.2		35.4	37.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.7	0.3	0.0	0.2	1.0	0.0	1.7	2.1		0.5	1.8	
Delay (s)	7.9	4.9	3.8	15.6	20.7	15.1	37.9	39.3		35.9	38.9	
Level of Service	A	A	A	B	C	B	D	D		D	D	
Approach Delay (s)		5.7			20.4			39.1			38.6	
Approach LOS		A			C			D			D	
Intersection Summary												
HCM 2000 Control Delay			18.0									B
HCM 2000 Volume to Capacity ratio			0.55									
Actuated Cycle Length (s)			94.0							15.5		
Intersection Capacity Utilization			76.6%									D
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
2: Taylor Road & East Access

Existing Conditions - AM Peak
02/05/2025



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	9	24	23	329	295	12
Future Volume (vph)	9	24	23	329	295	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0	110.0			80.0
Storage Lanes	1	1	1			1
Taper Length (m)	2.5		100.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	966	833	951	1812	1830	1150
Flt Permitted	0.950		0.557			
Satd. Flow (perm)	966	833	557	1812	1830	1150
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		28				14
Link Speed (k/h)	50			70	70	
Link Distance (m)	70.6			713.0	427.2	
Travel Time (s)	5.1			36.7	22.0	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	89%	96%	92%	6%	5%	42%
Adj. Flow (vph)	10	28	26	378	339	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	28	26	378	339	14
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (m)	6.1	6.1	6.1	30.5	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	6.1	6.1	1.8	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)				28.7	28.7	
Detector 2 Size(m)				1.8	1.8	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	

Lanes, Volumes, Timings
2: Taylor Road & East Access

Existing Conditions - AM Peak
02/05/2025

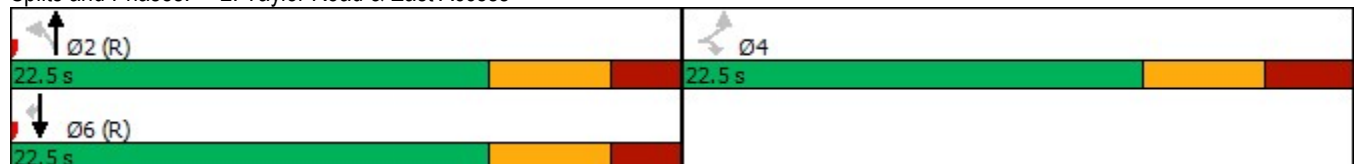


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases	4	4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	15.4	15.4	16.0	16.0	16.0	16.0
Yellow Time (s)	4.1	4.1	4.1	4.1	4.1	4.1
All-Red Time (s)	3.0	3.0	2.4	2.4	2.4	2.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.1	7.1	6.5	6.5	6.5	6.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0	4.0	2.5	2.5	2.5	2.5
Recall Mode	None	None	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effect Green (s)	10.0	10.0	35.6	35.6	35.6	35.6
Actuated g/C Ratio	0.22	0.22	0.79	0.79	0.79	0.79
v/c Ratio	0.05	0.14	0.06	0.26	0.23	0.02
Control Delay	14.8	8.7	6.1	5.5	5.3	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.8	8.7	6.1	5.5	5.3	3.8
LOS	B	A	A	A	A	A
Approach Delay	10.3			5.5	5.2	
Approach LOS	B			A	A	

Intersection Summary

Area Type: Other
 Cycle Length: 45
 Actuated Cycle Length: 45
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
 Natural Cycle: 45
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.26
 Intersection Signal Delay: 5.6
 Intersection LOS: A
 Intersection Capacity Utilization 38.8%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 2: Taylor Road & East Access



HCM Signalized Intersection Capacity Analysis
2: Taylor Road & East Access

Existing Conditions - AM Peak
02/05/2025














Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	9	24	23	329	295	12
Future Volume (vph)	9	24	23	329	295	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	7.1	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	966	833	951	1812	1830	1150
Flt Permitted	0.95	1.00	0.56	1.00	1.00	1.00
Satd. Flow (perm)	966	833	557	1812	1830	1150
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	10	28	26	378	339	14
RTOR Reduction (vph)	0	26	0	0	0	5
Lane Group Flow (vph)	10	2	26	378	339	9
Heavy Vehicles (%)	89%	96%	92%	6%	5%	42%
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Actuated Green, G (s)	4.0	4.0	27.4	27.4	27.4	27.4
Effective Green, g (s)	4.0	4.0	27.4	27.4	27.4	27.4
Actuated g/C Ratio	0.09	0.09	0.61	0.61	0.61	0.61
Clearance Time (s)	7.1	7.1	6.5	6.5	6.5	6.5
Vehicle Extension (s)	4.0	4.0	2.5	2.5	2.5	2.5
Lane Grp Cap (vph)	85	74	339	1103	1114	700
v/s Ratio Prot				c0.21	0.19	
v/s Ratio Perm	c0.01	0.00	0.05			0.01
v/c Ratio	0.12	0.03	0.08	0.34	0.30	0.01
Uniform Delay, d1	18.9	18.7	3.6	4.3	4.2	3.5
Progression Factor	1.02	1.01	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.8	0.3	0.4	0.8	0.7	0.0
Delay (s)	20.0	19.2	4.1	5.2	4.9	3.5
Level of Service	C	B	A	A	A	A
Approach Delay (s)	19.4			5.1	4.9	
Approach LOS	B			A	A	

Intersection Summary			
HCM 2000 Control Delay	5.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	13.6
Intersection Capacity Utilization	38.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
3: Taylor Road & Mountain Rd

Existing Conditions - AM Peak
02/05/2025

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	170	81	249	89	39	137
Future Volume (vph)	170	81	249	89	39	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	75.0	0.0		0.0	95.0	
Storage Lanes	1	1		0	1	
Taper Length (m)	100.0				100.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.965			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1755	1570	1712	0	1722	1731
Flt Permitted	0.950				0.478	
Satd. Flow (perm)	1755	1570	1712	0	866	1731
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		93	23			
Link Speed (k/h)	70		70			60
Link Distance (m)	184.1		195.9			753.7
Travel Time (s)	9.5		10.1			45.2
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	4%	4%	8%	9%	6%	11%
Adj. Flow (vph)	195	93	286	102	45	157
Shared Lane Traffic (%)						
Lane Group Flow (vph)	195	93	388	0	45	157
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		3.7			3.7
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14		14	24	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (m)	6.1	6.1	30.5		6.1	30.5
Trailing Detector (m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Size(m)	6.1	6.1	1.8		6.1	1.8
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(m)			28.7			28.7
Detector 2 Size(m)			1.8			1.8
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Perm	Perm	NA		pm+pt	NA
Protected Phases			2		1	6

Lanes, Volumes, Timings
3: Taylor Road & Mountain Rd

Existing Conditions - AM Peak
02/05/2025

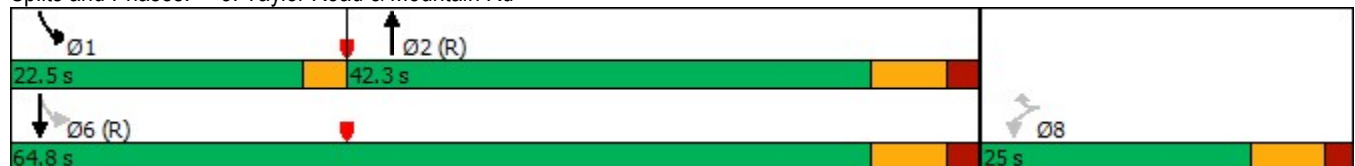


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Permitted Phases	8	8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	20.0		8.0	20.0
Minimum Split (s)	25.0	25.0	42.3		22.5	42.3
Total Split (s)	25.0	25.0	42.3		22.5	64.8
Total Split (%)	27.8%	27.8%	47.1%		25.1%	72.2%
Maximum Green (s)	18.0	18.0	35.0		19.5	57.5
Yellow Time (s)	5.0	5.0	5.0		3.0	5.0
All-Red Time (s)	2.0	2.0	2.3		0.0	2.3
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	7.0	7.0	7.3		3.0	7.3
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.4	2.4	2.4		2.8	2.4
Recall Mode	None	None	C-Max		None	C-Max
Walk Time (s)	7.0	7.0	13.0			13.0
Flash Dont Walk (s)	11.0	11.0	22.0			22.0
Pedestrian Calls (#/hr)	0	0	0			0
Act Effct Green (s)	14.4	14.4	54.5		65.4	61.1
Actuated g/C Ratio	0.16	0.16	0.61		0.73	0.68
v/c Ratio	0.70	0.28	0.37		0.06	0.13
Control Delay	48.6	9.3	11.3		4.3	5.9
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	48.6	9.3	11.3		4.3	5.9
LOS	D	A	B		A	A
Approach Delay	35.9		11.3			5.5
Approach LOS	D		B			A

Intersection Summary

Area Type: Other
 Cycle Length: 89.8
 Actuated Cycle Length: 89.8
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.70
 Intersection Signal Delay: 18.1
 Intersection Capacity Utilization 49.9%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service A

Splits and Phases: 3: Taylor Road & Mountain Rd



HCM Signalized Intersection Capacity Analysis
3: Taylor Road & Mountain Rd

Existing Conditions - AM Peak
02/05/2025



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	170	81	249	89	39	137
Future Volume (vph)	170	81	249	89	39	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.3		3.0	7.3
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.96		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1755	1570	1712		1722	1731
Flt Permitted	0.95	1.00	1.00		0.48	1.00
Satd. Flow (perm)	1755	1570	1712		867	1731
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	195	93	286	102	45	157
RTOR Reduction (vph)	0	78	9	0	0	0
Lane Group Flow (vph)	195	15	379	0	45	157
Heavy Vehicles (%)	4%	4%	8%	9%	6%	11%
Turn Type	Perm	Perm	NA		pm+pt	NA
Protected Phases			2		1	6
Permitted Phases	8	8			6	
Actuated Green, G (s)	14.4	14.4	53.3		61.1	61.1
Effective Green, g (s)	14.4	14.4	53.3		61.1	61.1
Actuated g/C Ratio	0.16	0.16	0.59		0.68	0.68
Clearance Time (s)	7.0	7.0	7.3		3.0	7.3
Vehicle Extension (s)	2.4	2.4	2.4		2.8	2.4
Lane Grp Cap (vph)	281	251	1016		635	1177
v/s Ratio Prot			c0.22		0.00	c0.09
v/s Ratio Perm	c0.11	0.01			0.04	
v/c Ratio	0.69	0.06	0.37		0.07	0.13
Uniform Delay, d1	35.6	32.0	9.5		4.9	5.0
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	6.5	0.1	1.0		0.0	0.2
Delay (s)	42.1	32.0	10.6		4.9	5.3
Level of Service	D	C	B		A	A
Approach Delay (s)	38.9		10.6			5.2
Approach LOS	D		B			A

Intersection Summary			
HCM 2000 Control Delay	18.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	89.8	Sum of lost time (s)	17.3
Intersection Capacity Utilization	49.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
4: Taylor Road & Primary Quarry Access

Existing Conditions - AM Peak
02/05/2025



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	4	13	316	175	39
Future Volume (vph)	0	4	13	316	175	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0	40.0			0.0
Storage Lanes	1	1	1			0
Taper Length (m)	2.5		100.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.976	
Flt Protected			0.950			
Satd. Flow (prot)	1883	1601	1472	1795	1723	0
Flt Permitted			0.950			
Satd. Flow (perm)	1883	1601	1472	1795	1723	0
Link Speed (k/h)	48			60	60	
Link Distance (m)	375.1			753.7	268.8	
Travel Time (s)	28.1			45.2	16.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	24%	7%	9%	8%
Adj. Flow (vph)	0	4	14	343	190	42
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	4	14	343	232	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	21.6%			ICU Level of Service A		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis
4: Taylor Road & Primary Quarry Access

Existing Conditions - AM Peak
02/05/2025



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	4	13	316	175	39
Future Volume (Veh/h)	0	4	13	316	175	39
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	4	14	343	190	42
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	582	211	232			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	582	211	232			
tC, single (s)	6.4	6.2	4.3			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.4			
p0 queue free %	100	100	99			
cM capacity (veh/h)	470	829	1216			
Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	
Volume Total	0	4	14	343	232	
Volume Left	0	0	14	0	0	
Volume Right	0	4	0	0	42	
cSH	1700	829	1216	1700	1700	
Volume to Capacity	0.00	0.00	0.01	0.20	0.14	
Queue Length 95th (m)	0.0	0.1	0.3	0.0	0.0	
Control Delay (s)	0.0	9.4	8.0	0.0	0.0	
Lane LOS	A	A	A			
Approach Delay (s)	9.4		0.3		0.0	
Approach LOS	A					
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization			21.6%	ICU Level of Service	A	
Analysis Period (min)			15			

Lanes, Volumes, Timings
5: Taylor Road/Taylor Rd & Thorold Townline Rd

Existing Conditions - AM Peak
02/05/2025



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	11	0	43	324	273	29
Future Volume (vph)	11	0	43	324	273	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	50.0	0.0			0.0
Storage Lanes	1	1	1			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.987	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1789	1883	1772	1715	1677	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1789	1883	1772	1715	1677	0
Link Speed (k/h)	50			70	70	
Link Distance (m)	204.8			328.2	1008.3	
Travel Time (s)	14.7			16.9	51.9	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	2%	2%	3%	12%	14%	4%
Adj. Flow (vph)	12	0	46	348	294	31
Shared Lane Traffic (%)						
Lane Group Flow (vph)	12	0	46	348	325	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			7.4	7.4	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	32.8%			ICU Level of Service A		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis
5: Taylor Road/Taylor Rd & Thorold Townline Rd

















Existing Conditions - AM Peak
02/05/2025



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	11	0	43	324	273	29
Future Volume (Veh/h)	11	0	43	324	273	29
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	12	0	46	348	294	31
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)	7					
Median type				None	None	
Median storage veh						
Upstream signal (m)	328					
pX, platoon unblocked						
vC, conflicting volume	750	310	325			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	750	310	325			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	100	96			
cM capacity (veh/h)	365	731	1229			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1		
Volume Total	12	46	348	325		
Volume Left	12	46	0	0		
Volume Right	0	0	0	31		
cSH	290	1229	1700	1700		
Volume to Capacity	0.04	0.04	0.20	0.19		
Queue Length 95th (m)	1.0	0.9	0.0	0.0		
Control Delay (s)	18.0	8.0	0.0	0.0		
Lane LOS	C	A				
Approach Delay (s)	18.0	0.9	0.0			
Approach LOS	C					
Intersection Summary						
Average Delay	0.8					
Intersection Capacity Utilization	32.8%			ICU Level of Service	A	
Analysis Period (min)	15					

Lanes, Volumes, Timings
6: Mountain Rd & Garner Road

Existing Conditions - AM Peak
02/05/2025

















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	122	9	22	219	8	18	5	51	3	2	4
Future Volume (vph)	0	122	9	22	219	8	18	5	51	3	2	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.990			0.995			0.907			0.940	
Fl _t Protected					0.996			0.988			0.984	
Satd. Flow (prot)	0	1755	0	0	1824	0	0	1675	0	0	1777	0
Fl _t Permitted					0.996			0.988			0.984	
Satd. Flow (perm)	0	1755	0	0	1824	0	0	1675	0	0	1777	0
Link Speed (k/h)		70			70			80			60	
Link Distance (m)		884.7			985.2			693.4			600.2	
Travel Time (s)		45.5			50.7			31.2			36.0	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	9%	0%	0%	5%	0%	0%	0%	4%	0%	0%	0%
Adj. Flow (vph)	0	130	10	23	233	9	19	5	54	3	2	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	140	0	0	265	0	0	78	0	0	9	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	35.5%
ICU Level of Service	A
Analysis Period (min)	15


















HCM Unsignalized Intersection Capacity Analysis
6: Mountain Rd & Garner Road

Existing Conditions - AM Peak
02/05/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	122	9	22	219	8	18	5	51	3	2	4
Future Volume (Veh/h)	0	122	9	22	219	8	18	5	51	3	2	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	0	130	10	23	233	9	19	5	54	3	2	4
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	242			140			424	423	135	475	424	238
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	242			140			424	423	135	475	424	238
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			96	99	94	99	100	100
cM capacity (veh/h)	1324			1456			533	517	909	464	517	806
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	140	265	78	9								
Volume Left	0	23	19	3								
Volume Right	10	9	54	4								
cSH	1324	1456	745	589								
Volume to Capacity	0.00	0.02	0.10	0.02								
Queue Length 95th (m)	0.0	0.4	2.7	0.4								
Control Delay (s)	0.0	0.8	10.4	11.2								
Lane LOS		A	B	B								
Approach Delay (s)	0.0	0.8	10.4	11.2								
Approach LOS			B	B								
Intersection Summary												
Average Delay			2.3									
Intersection Capacity Utilization			35.5%		ICU Level of Service				A			
Analysis Period (min)			15									

Lanes, Volumes, Timings
7: Beechwood Road & Thorold Stone Road

Existing Conditions - AM Peak
02/05/2025



















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	708	5	4	855	9	11	10	4	3	13	0
Future Volume (vph)	1	708	5	4	855	9	11	10	4	3	13	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.998			0.980				
Flt Protected								0.978			0.991	
Satd. Flow (prot)	0	3510	1633	0	3535	0	0	1708	0	0	1904	0
Flt Permitted								0.978			0.991	
Satd. Flow (perm)	0	3510	1633	0	3535	0	0	1708	0	0	1904	0
Link Speed (k/h)		80			80			80			80	
Link Distance (m)		1007.9			1349.4			495.3			723.5	
Travel Time (s)		45.4			60.7			22.3			32.6	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	4%	0%	25%	3%	0%	0%	10%	25%	0%	0%	2%
Adj. Flow (vph)	1	753	5	4	910	10	12	11	4	3	14	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	754	5	0	924	0	0	27	0	0	17	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	40.7%
ICU Level of Service	A
Analysis Period (min)	15











HCM Unsignalized Intersection Capacity Analysis
7: Beechwood Road & Thorold Stone Road

Existing Conditions - AM Peak
02/05/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	708	5	4	855	9	11	10	4	3	13	0
Future Volume (Veh/h)	1	708	5	4	855	9	11	10	4	3	13	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	1	753	5	4	910	10	12	11	4	3	14	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	920			758			1225	1683	376	1311	1683	460
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	920			758			1225	1683	376	1311	1683	460
tC, single (s)	4.1			4.6			7.5	6.7	7.4	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.5			3.5	4.1	3.5	3.5	4.0	3.3
p0 queue free %	100			99			90	87	99	97	85	100
cM capacity (veh/h)	750			714			121	85	560	106	95	548
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1					
Volume Total	252	502	5	459	465	27	17					
Volume Left	1	0	0	4	0	12	3					
Volume Right	0	0	5	0	10	4	0					
cSH	750	1700	1700	714	1700	115	96					
Volume to Capacity	0.00	0.30	0.00	0.01	0.27	0.24	0.18					
Queue Length 95th (m)	0.0	0.0	0.0	0.1	0.0	6.5	4.6					
Control Delay (s)	0.1	0.0	0.0	0.2	0.0	45.7	50.2					
Lane LOS	A			A		E	F					
Approach Delay (s)	0.0			0.1		45.7	50.2					
Approach LOS						E	F					
Intersection Summary												
Average Delay			1.3									
Intersection Capacity Utilization			40.7%		ICU Level of Service		A					
Analysis Period (min)			15									











Lanes, Volumes, Timings
8: Taylor Road & Beechwood Rd

Existing Conditions - AM Peak
02/05/2025

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	1	20	318	2	17	320
Future Volume (vph)	1	20	318	2	17	320
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0		0.0	85.0	
Storage Lanes	1	0		0	1	
Taper Length (m)	2.5				100.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.871		0.999			
Flt Protected	0.998				0.950	
Satd. Flow (prot)	1523	0	1882	0	1615	1883
Flt Permitted	0.998				0.950	
Satd. Flow (perm)	1523	0	1882	0	1615	1883
Link Speed (k/h)	80		70			70
Link Distance (m)	79.4		1008.3			713.0
Travel Time (s)	3.6		51.9			36.7
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	2%	10%	2%	2%	13%	2%
Adj. Flow (vph)	1	22	349	2	19	352
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	0	351	0	19	352
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		3.7			3.7
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	97		14	97	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	26.9%			ICU Level of Service A		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis
8: Taylor Road & Beechwood Rd

Existing Conditions - AM Peak
02/05/2025

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	1	20	318	2	17	320
Future Volume (Veh/h)	1	20	318	2	17	320
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	1	22	349	2	19	352
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	740	350			351	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	740	350			351	
tC, single (s)	6.4	6.3			4.2	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.3	
p0 queue free %	100	97			98	
cM capacity (veh/h)	378	676			1149	
Direction, Lane #	WB 1	NB 1	SB 1	SB 2		
Volume Total	23	351	19	352		
Volume Left	1	0	19	0		
Volume Right	22	2	0	0		
cSH	653	1700	1149	1700		
Volume to Capacity	0.04	0.21	0.02	0.21		
Queue Length 95th (m)	0.8	0.0	0.4	0.0		
Control Delay (s)	10.7	0.0	8.2	0.0		
Lane LOS	B		A			
Approach Delay (s)	10.7	0.0	0.4			
Approach LOS	B					
Intersection Summary						
Average Delay			0.5			
Intersection Capacity Utilization			26.9%		ICU Level of Service	A
Analysis Period (min)			15			



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	30	14	30	50	24	8
Future Volume (vph)	30	14	30	50	24	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.957				0.966	
Flt Protected	0.967			0.982		
Satd. Flow (prot)	1590	0	0	1850	1772	0
Flt Permitted	0.967			0.982		
Satd. Flow (perm)	1590	0	0	1850	1772	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	307.8			204.8	258.0	
Travel Time (s)	22.2			14.7	18.6	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	7%	22%	2%	2%	2%	13%
Adj. Flow (vph)	38	18	38	63	30	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	56	0	0	101	40	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	21.0%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis
 9: Thorold Townline Rd/Thorold Townlie Rd & Old Thorold Stone Rd

Existing Conditions - AM Peak
 02/05/2025



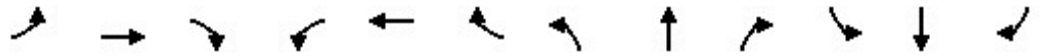
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	30	14	30	50	24	8
Future Volume (Veh/h)	30	14	30	50	24	8
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	38	18	38	62	30	10
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	173	35	40			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	173	35	40			
tC, single (s)	6.5	6.4	4.1			
tC, 2 stage (s)						
tF (s)	3.6	3.5	2.2			
p0 queue free %	95	98	98			
cM capacity (veh/h)	786	983	1570			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	56	100	40			
Volume Left	38	38	0			
Volume Right	18	0	10			
cSH	840	1570	1700			
Volume to Capacity	0.07	0.02	0.02			
Queue Length 95th (m)	1.6	0.6	0.0			
Control Delay (s)	9.6	2.9	0.0			
Lane LOS	A	A				
Approach Delay (s)	9.6	2.9	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			4.2			
Intersection Capacity Utilization			21.0%	ICU Level of Service	A	
Analysis Period (min)			15			

Lanes, Volumes, Timings

Existing Conditions - AM Peak

10: Thorold Townline Road/Access Road & North West Access Road

02/05/2025



















Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	1	5	4	10	7	31	6	30	7	6	1	1
Future Volume (vph)	1	5	4	10	7	31	6	30	7	6	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.944			0.914			0.978			0.986	
Fl _t Protected		0.996			0.989			0.993			0.962	
Satd. Flow (prot)	0	1306	0	0	1658	0	0	1778	0	0	1657	0
Fl _t Permitted		0.996			0.989			0.993			0.962	
Satd. Flow (perm)	0	1306	0	0	1658	0	0	1778	0	0	1657	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		108.3			156.3			390.5			72.5	
Travel Time (s)		7.8			11.3			28.1			5.2	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	100%	60%	0%	0%	15%	4%	17%	0%	15%	0%	0%	100%
Adj. Flow (vph)	1	6	5	13	9	39	8	38	9	8	1	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	12	0	0	61	0	0	55	0	0	10	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	15.0%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis
 10: Thorold Townline Road/Access Road & North West Access Road

Existing Conditions - AM Peak
 02/05/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	1	5	4	10	7	31	6	30	7	6	1	1
Future Volume (vph)	1	5	4	10	7	31	6	30	7	6	1	1
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	1	6	5	12	9	39	8	38	9	8	1	1
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	12	60	55	10								
Volume Left (vph)	1	12	8	8								
Volume Right (vph)	5	39	9	1								
Hadj (s)	0.42	-0.27	0.01	0.27								
Departure Headway (s)	4.5	3.8	4.1	4.4								
Degree Utilization, x	0.02	0.06	0.06	0.01								
Capacity (veh/h)	779	930	857	804								
Control Delay (s)	7.6	7.0	7.3	7.4								
Approach Delay (s)	7.6	7.0	7.3	7.4								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			7.2									
Level of Service			A									
Intersection Capacity Utilization			15.0%	ICU Level of Service	A							
Analysis Period (min)			15									

Lanes, Volumes, Timings
 11: Quarry Access & Mountain Rd

Existing Conditions - AM Peak
 02/05/2025



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	130	1	0	244	1	0
Future Volume (vph)	130	1	0	244	1	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.999					
Flt Protected					0.950	
Satd. Flow (prot)	1762	0	0	1847	1825	0
Flt Permitted					0.950	
Satd. Flow (perm)	1762	0	0	1847	1825	0
Link Speed (k/h)	70			70	50	
Link Distance (m)	184.1			884.7	224.6	
Travel Time (s)	9.5			45.5	16.2	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	9%	0%	2%	4%	0%	2%
Adj. Flow (vph)	160	1	0	301	1	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	161	0	0	301	1	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	14		24	24		14
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	22.8%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis
 11: Quarry Access & Mountain Rd

Existing Conditions - AM Peak
 02/05/2025



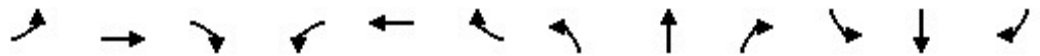
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	→			←	↘	↙
Traffic Volume (veh/h)	130	1	0	244	1	0
Future Volume (Veh/h)	130	1	0	244	1	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	160	1	0	301	1	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (m)	184					
pX, platoon unblocked						
vC, conflicting volume			161		462	160
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			161		462	160
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1418		562	885
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	161	301	1			
Volume Left	0	0	1			
Volume Right	1	0	0			
cSH	1700	1418	562			
Volume to Capacity	0.09	0.00	0.00			
Queue Length 95th (m)	0.0	0.0	0.0			
Control Delay (s)	0.0	0.0	11.4			
Lane LOS			B			
Approach Delay (s)	0.0	0.0	11.4			
Approach LOS			B			
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			22.8%	ICU Level of Service	A	
Analysis Period (min)			15			

Lanes, Volumes, Timings

Existing Conditions - AM Peak

12: Thorold Townlie Rd & Thorold Public Works Access/Landfill West Access

02/05/2025



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	0	8	0	0	2	2	54	3	3	11	0
Future Volume (vph)	0	0	8	0	0	2	2	54	3	3	11	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.865			0.865			0.994				
Fl _t Protected								0.998			0.990	
Satd. Flow (prot)	0	1471	0	0	1662	0	0	1806	0	0	1761	0
Fl _t Permitted								0.998			0.990	
Satd. Flow (perm)	0	1471	0	0	1662	0	0	1806	0	0	1761	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		102.1			176.5			258.0			689.0	
Travel Time (s)		7.4			12.7			18.6			49.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	13%	2%	2%	0%	0%	6%	0%	0%	10%	2%
Adj. Flow (vph)	0	0	9	0	0	2	2	60	3	3	12	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	9	0	0	2	0	0	65	0	0	15	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

















Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.3%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis

Existing Conditions - AM Peak

12: Thorold Townlie Rd & Thorold Public Works Access/Landfill West Access

02/05/2025

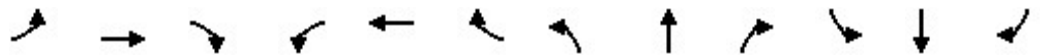
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	8	0	0	2	2	54	3	3	11	0
Future Volume (Veh/h)	0	0	8	0	0	2	2	54	3	3	11	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	9	0	0	2	2	60	3	3	12	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	86	85	12	92	84	62	12			63		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	86	85	12	92	84	62	12			63		
tC, single (s)	7.1	6.5	6.3	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.4	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	99	100	100	100	100			100		
cM capacity (veh/h)	897	803	1037	881	804	1009	1620			1553		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	9	2	65	15								
Volume Left	0	0	2	3								
Volume Right	9	2	3	0								
cSH	1037	1009	1620	1553								
Volume to Capacity	0.01	0.00	0.00	0.00								
Queue Length 95th (m)	0.2	0.0	0.0	0.0								
Control Delay (s)	8.5	8.6	0.2	1.5								
Lane LOS	A	A	A	A								
Approach Delay (s)	8.5	8.6	0.2	1.5								
Approach LOS	A	A										
Intersection Summary												
Average Delay			1.4									
Intersection Capacity Utilization			13.3%		ICU Level of Service					A		
Analysis Period (min)			15									

Lanes, Volumes, Timings

Existing Conditions - PM Peak

1: Thorold Townline Road/Taylor Road & Thorold Stone Road

02/05/2025



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	236	1027	52	36	796	26	59	80	20	51	149	249
Future Volume (vph)	236	1027	52	36	796	26	59	80	20	51	149	249
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	95.0		95.0	85.0		90.0	100.0		0.0	80.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	85.0			100.0			90.0			40.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.969			0.906	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1722	3579	1512	1825	3579	1458	1706	1790	0	1825	1670	0
Flt Permitted	0.244			0.270			0.200			0.690		
Satd. Flow (perm)	442	3579	1512	519	3579	1458	359	1790	0	1326	1670	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			54			74		17			111	
Link Speed (k/h)		80			80			80			80	
Link Distance (m)		291.4			1007.9			528.0			328.2	
Travel Time (s)		13.1			45.4			23.8			14.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	6%	2%	8%	0%	2%	12%	7%	5%	0%	0%	3%	5%
Adj. Flow (vph)	243	1059	54	37	821	27	61	82	21	53	154	257
Shared Lane Traffic (%)												
Lane Group Flow (vph)	243	1059	54	37	821	27	61	103	0	53	411	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2			6			4			8	

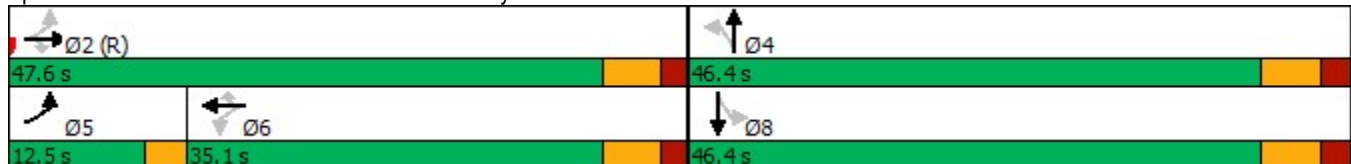


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	4	4		8		
Detector Phase	5	2	2	6	6	6	4	4		8	8	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	12.5	35.1	35.1	35.1	35.1	35.1	46.4	46.4		46.4	46.4	
Total Split (s)	12.5	47.6	47.6	35.1	35.1	35.1	46.4	46.4		46.4	46.4	
Total Split (%)	13.3%	50.6%	50.6%	37.3%	37.3%	37.3%	49.4%	49.4%		49.4%	49.4%	
Maximum Green (s)	9.5	41.5	41.5	29.0	29.0	29.0	40.0	40.0		40.0	40.0	
Yellow Time (s)	3.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1		4.1	4.1	
All-Red Time (s)	0.0	2.0	2.0	2.0	2.0	2.0	2.3	2.3		2.3	2.3	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.0	6.1	6.1	6.1	6.1	6.1	6.4	6.4		6.4	6.4	
Lead/Lag	Lead			Lag			Lag					
Lead-Lag Optimize?	Yes			Yes			Yes					
Vehicle Extension (s)	2.5	6.0	6.0	6.0	6.0	6.0	2.3	2.3		2.3	2.3	
Recall Mode	None	C-Max	C-Max	None	None	None	None	None		None	None	
Walk Time (s)		11.0	11.0	11.0	11.0	11.0	15.0	15.0		15.0	15.0	
Flash Dont Walk (s)		18.0	18.0	18.0	18.0	18.0	25.0	25.0		25.0	25.0	
Pedestrian Calls (#/hr)		0	0	0	0	0	0	0		0	0	
Act Effct Green (s)	61.1	58.0	58.0	42.7	42.7	42.7	23.5	23.5		23.5	23.5	
Actuated g/C Ratio	0.65	0.62	0.62	0.45	0.45	0.45	0.25	0.25		0.25	0.25	
v/c Ratio	0.53	0.48	0.06	0.16	0.51	0.04	0.69	0.22		0.16	0.82	
Control Delay	12.8	12.0	3.4	22.6	21.9	0.1	65.7	21.9		25.4	37.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	12.8	12.0	3.4	22.6	21.9	0.1	65.7	21.9		25.4	37.1	
LOS	B	B	A	C	C	A	E	C		C	D	
Approach Delay		11.8			21.2			38.2			35.8	
Approach LOS		B			C			D			D	

Intersection Summary

Area Type:	Other
Cycle Length:	94
Actuated Cycle Length:	94
Offset:	0 (0%), Referenced to phase 2:EBTL, Start of Green
Natural Cycle:	95
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.82
Intersection Signal Delay:	20.1
Intersection LOS:	C
Intersection Capacity Utilization:	89.0%
ICU Level of Service:	E
Analysis Period (min):	15

Splits and Phases: 1: Thorold Townline Road/Taylor Road & Thorold Stone Road



HCM Signalized Intersection Capacity Analysis
 1: Thorold Townline Road/Taylor Road & Thorold Stone Road

Existing Conditions - PM Peak
 02/05/2025

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	236	1027	52	36	796	26	59	80	20	51	149	249	
Future Volume (vph)	236	1027	52	36	796	26	59	80	20	51	149	249	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	3.0	6.1	6.1	6.1	6.1	6.1	6.4	6.4		6.4	6.4		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		1.00	1.00		
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.91		
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (prot)	1722	3579	1512	1825	3579	1458	1706	1791		1825	1670		
Flt Permitted	0.24	1.00	1.00	0.27	1.00	1.00	0.20	1.00		0.69	1.00		
Satd. Flow (perm)	442	3579	1512	519	3579	1458	360	1791		1326	1670		
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	
Adj. Flow (vph)	243	1059	54	37	821	27	61	82	21	53	154	257	
RTOR Reduction (vph)	0	0	21	0	0	15	0	13	0	0	83	0	
Lane Group Flow (vph)	243	1059	33	37	821	12	61	90	0	53	328	0	
Heavy Vehicles (%)	6%	2%	8%	0%	2%	12%	7%	5%	0%	0%	3%	5%	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA		
Protected Phases	5	2			6			4			8		
Permitted Phases	2		2	6		6	4	4		8			
Actuated Green, G (s)	58.0	58.0	58.0	42.7	42.7	42.7	23.5	23.5		23.5	23.5		
Effective Green, g (s)	58.0	58.0	58.0	42.7	42.7	42.7	23.5	23.5		23.5	23.5		
Actuated g/C Ratio	0.62	0.62	0.62	0.45	0.45	0.45	0.25	0.25		0.25	0.25		
Clearance Time (s)	3.0	6.1	6.1	6.1	6.1	6.1	6.4	6.4		6.4	6.4		
Vehicle Extension (s)	2.5	6.0	6.0	6.0	6.0	6.0	2.3	2.3		2.3	2.3		
Lane Grp Cap (vph)	440	2208	932	235	1625	662	90	447		331	417		
v/s Ratio Prot	c0.07	0.30			0.23			0.05			c0.20		
v/s Ratio Perm	c0.27		0.02	0.07		0.01	0.17			0.04			
v/c Ratio	0.55	0.48	0.04	0.16	0.51	0.02	0.68	0.20		0.16	0.79		
Uniform Delay, d1	9.5	9.8	7.0	15.1	18.2	14.1	31.8	27.8		27.5	32.9		
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		
Incremental Delay, d2	1.2	0.7	0.1	0.9	0.7	0.0	16.0	0.1		0.1	8.9		
Delay (s)	10.7	10.5	7.1	16.0	18.9	14.1	47.8	28.0		27.7	41.8		
Level of Service	B	B	A	B	B	B	D	C		C	D		
Approach Delay (s)		10.4			18.6			35.4			40.2		
Approach LOS		B			B			D			D		
Intersection Summary													
HCM 2000 Control Delay			19.2		HCM 2000 Level of Service						B		
HCM 2000 Volume to Capacity ratio			0.64										
Actuated Cycle Length (s)			94.0		Sum of lost time (s)					15.5			
Intersection Capacity Utilization			89.0%		ICU Level of Service					E			
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
2: Taylor Road & East Access

Existing Conditions - PM Peak
02/05/2025



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	10	12	7	312	428	1
Future Volume (vph)	10	12	7	312	428	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0	110.0			80.0
Storage Lanes	1	1	1			1
Taper Length (m)	2.5		100.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1141	933	981	1830	1865	816
Flt Permitted	0.950		0.505			
Satd. Flow (perm)	1141	933	522	1830	1865	816
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		13				1
Link Speed (k/h)	50			70	70	
Link Distance (m)	70.6			713.0	427.2	
Travel Time (s)	5.1			36.7	22.0	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	60%	75%	86%	5%	3%	100%
Adj. Flow (vph)	10	13	7	325	446	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	13	7	325	446	1
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (m)	6.1	6.1	6.1	30.5	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	6.1	6.1	1.8	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)				28.7	28.7	
Detector 2 Size(m)				1.8	1.8	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	

Lanes, Volumes, Timings
2: Taylor Road & East Access

Existing Conditions - PM Peak
02/05/2025

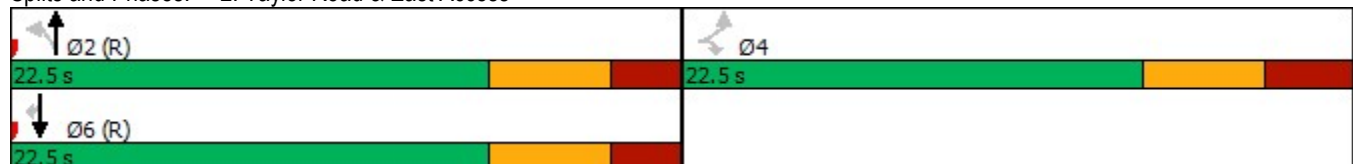


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases	4	4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	15.4	15.4	16.0	16.0	16.0	16.0
Yellow Time (s)	4.1	4.1	4.1	4.1	4.1	4.1
All-Red Time (s)	3.0	3.0	2.4	2.4	2.4	2.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.1	7.1	6.5	6.5	6.5	6.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0	4.0	2.5	2.5	2.5	2.5
Recall Mode	None	None	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	10.0	10.0	40.3	40.3	40.3	40.3
Actuated g/C Ratio	0.22	0.22	0.90	0.90	0.90	0.90
v/c Ratio	0.04	0.06	0.01	0.20	0.27	0.00
Control Delay	14.3	9.0	4.0	3.1	3.4	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.3	9.0	4.0	3.1	3.4	4.0
LOS	B	A	A	A	A	A
Approach Delay	11.3			3.1	3.4	
Approach LOS	B			A	A	

Intersection Summary

Area Type: Other
 Cycle Length: 45
 Actuated Cycle Length: 45
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
 Natural Cycle: 45
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.27
 Intersection Signal Delay: 3.5
 Intersection Capacity Utilization 42.2%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 2: Taylor Road & East Access



HCM Signalized Intersection Capacity Analysis
2: Taylor Road & East Access

Existing Conditions - PM Peak
02/05/2025














Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	10	12	7	312	428	1
Future Volume (vph)	10	12	7	312	428	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	7.1	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1141	933	981	1830	1865	816
Flt Permitted	0.95	1.00	0.50	1.00	1.00	1.00
Satd. Flow (perm)	1141	933	521	1830	1865	816
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	10	12	7	325	446	1
RTOR Reduction (vph)	0	12	0	0	0	0
Lane Group Flow (vph)	10	1	7	325	446	1
Heavy Vehicles (%)	60%	75%	86%	5%	3%	100%
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Actuated Green, G (s)	2.0	2.0	29.4	29.4	29.4	29.4
Effective Green, g (s)	2.0	2.0	29.4	29.4	29.4	29.4
Actuated g/C Ratio	0.04	0.04	0.65	0.65	0.65	0.65
Clearance Time (s)	7.1	7.1	6.5	6.5	6.5	6.5
Vehicle Extension (s)	4.0	4.0	2.5	2.5	2.5	2.5
Lane Grp Cap (vph)	50	41	340	1195	1218	533
v/s Ratio Prot				0.18	c0.24	
v/s Ratio Perm	c0.01	0.00	0.01			0.00
v/c Ratio	0.20	0.01	0.02	0.27	0.37	0.00
Uniform Delay, d1	20.7	20.6	2.7	3.3	3.6	2.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.7	0.2	0.1	0.6	0.9	0.0
Delay (s)	23.4	20.7	2.9	3.9	4.4	2.7
Level of Service	C	C	A	A	A	A
Approach Delay (s)	21.9			3.8	4.4	
Approach LOS	C			A	A	

Intersection Summary			
HCM 2000 Control Delay	4.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	13.6
Intersection Capacity Utilization	42.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
3: Taylor Road & Mountain Rd

Existing Conditions - PM Peak
02/05/2025

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	115	64	189	138	115	313
Future Volume (vph)	115	64	189	138	115	313
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	75.0	0.0		0.0	95.0	
Storage Lanes	1	1		0	1	
Taper Length (m)	100.0				100.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.943			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1789	1570	1714	0	1789	1865
Flt Permitted	0.950				0.510	
Satd. Flow (perm)	1789	1570	1714	0	961	1865
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		67	48			
Link Speed (k/h)	70		70			60
Link Distance (m)	184.1		195.9			753.7
Travel Time (s)	9.5		10.1			45.2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	4%	4%	8%	2%	3%
Adj. Flow (vph)	121	67	199	145	121	329
Shared Lane Traffic (%)						
Lane Group Flow (vph)	121	67	344	0	121	329
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		3.7			3.7
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14		14	24	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (m)	6.1	6.1	30.5		6.1	30.5
Trailing Detector (m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Size(m)	6.1	6.1	1.8		6.1	1.8
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(m)			28.7			28.7
Detector 2 Size(m)			1.8			1.8
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Perm	Perm	NA		pm+pt	NA
Protected Phases			2		1	6

Lanes, Volumes, Timings
3: Taylor Road & Mountain Rd

Existing Conditions - PM Peak
02/05/2025

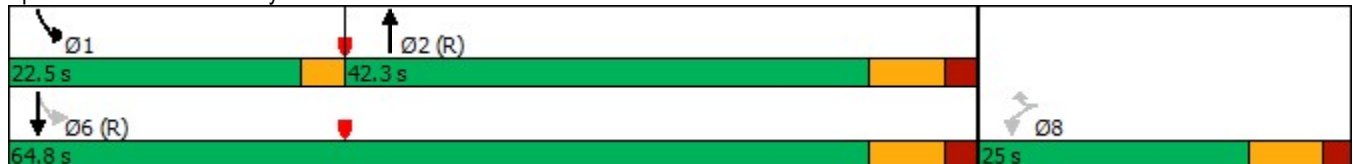


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Permitted Phases	8	8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	20.0		8.0	20.0
Minimum Split (s)	25.0	25.0	42.3		22.5	42.3
Total Split (s)	25.0	25.0	42.3		22.5	64.8
Total Split (%)	27.8%	27.8%	47.1%		25.1%	72.2%
Maximum Green (s)	18.0	18.0	35.0		19.5	57.5
Yellow Time (s)	5.0	5.0	5.0		3.0	5.0
All-Red Time (s)	2.0	2.0	2.3		0.0	2.3
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	7.0	7.0	7.3		3.0	7.3
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.4	2.4	2.4		2.8	2.4
Recall Mode	None	None	C-Max		None	C-Max
Walk Time (s)	7.0	7.0	13.0			13.0
Flash Dont Walk (s)	11.0	11.0	22.0			22.0
Pedestrian Calls (#/hr)	0	0	0			0
Act Effct Green (s)	11.7	11.7	52.7		68.1	63.8
Actuated g/C Ratio	0.13	0.13	0.59		0.76	0.71
v/c Ratio	0.52	0.25	0.34		0.15	0.25
Control Delay	44.2	11.4	9.6		3.6	5.4
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	44.2	11.4	9.6		3.6	5.4
LOS	D	B	A		A	A
Approach Delay	32.5		9.6			4.9
Approach LOS	C		A			A

Intersection Summary

Area Type: Other
 Cycle Length: 89.8
 Actuated Cycle Length: 89.8
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.52
 Intersection Signal Delay: 11.8
 Intersection Capacity Utilization 48.6%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service A

Splits and Phases: 3: Taylor Road & Mountain Rd



HCM Signalized Intersection Capacity Analysis
 3: Taylor Road & Mountain Rd

Existing Conditions - PM Peak
 02/05/2025



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	115	64	189	138	115	313
Future Volume (vph)	115	64	189	138	115	313
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.3		3.0	7.3
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.94		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1789	1570	1714		1789	1865
Flt Permitted	0.95	1.00	1.00		0.51	1.00
Satd. Flow (perm)	1789	1570	1714		960	1865
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	121	67	199	145	121	329
RTOR Reduction (vph)	0	58	20	0	0	0
Lane Group Flow (vph)	121	9	324	0	121	329
Heavy Vehicles (%)	2%	4%	4%	8%	2%	3%
Turn Type	Perm	Perm	NA		pm+pt	NA
Protected Phases			2		1	6
Permitted Phases	8	8			6	
Actuated Green, G (s)	11.7	11.7	52.7		63.8	63.8
Effective Green, g (s)	11.7	11.7	52.7		63.8	63.8
Actuated g/C Ratio	0.13	0.13	0.59		0.71	0.71
Clearance Time (s)	7.0	7.0	7.3		3.0	7.3
Vehicle Extension (s)	2.4	2.4	2.4		2.8	2.4
Lane Grp Cap (vph)	233	204	1005		756	1325
v/s Ratio Prot			c0.19		0.01	c0.18
v/s Ratio Perm	c0.07	0.01			0.10	
v/c Ratio	0.52	0.04	0.32		0.16	0.25
Uniform Delay, d1	36.4	34.2	9.5		4.2	4.6
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.3	0.1	0.9		0.1	0.4
Delay (s)	37.8	34.2	10.3		4.3	5.0
Level of Service	D	C	B		A	A
Approach Delay (s)	36.5		10.3			4.8
Approach LOS	D		B			A

Intersection Summary			
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	89.8	Sum of lost time (s)	17.3
Intersection Capacity Utilization	48.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
4: Taylor Road & Primary Quarry Access

Existing Conditions - PM Peak
02/05/2025



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	13	3	250	418	8
Future Volume (vph)	0	13	3	250	418	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0	40.0			0.0
Storage Lanes	1	1	1			0
Taper Length (m)	2.5		100.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.997	
Flt Protected			0.950			
Satd. Flow (prot)	1883	1601	1362	1847	1870	0
Flt Permitted			0.950			
Satd. Flow (perm)	1883	1601	1362	1847	1870	0
Link Speed (k/h)	48			60	60	
Link Distance (m)	375.1			753.7	268.8	
Travel Time (s)	28.1			45.2	16.1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	2%	2%	34%	4%	2%	25%
Adj. Flow (vph)	0	14	3	269	449	9
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	14	3	269	458	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	32.5%			ICU Level of Service A		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis
4: Taylor Road & Primary Quarry Access

Existing Conditions - PM Peak
02/05/2025



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	13	3	250	418	8
Future Volume (Veh/h)	0	13	3	250	418	8
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	0	14	3	269	449	9
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	728	454	458			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	728	454	458			
tC, single (s)	6.4	6.2	4.4			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.5			
p0 queue free %	100	98	100			
cM capacity (veh/h)	389	606	954			
Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	
Volume Total	0	14	3	269	458	
Volume Left	0	0	3	0	0	
Volume Right	0	14	0	0	9	
cSH	1700	606	954	1700	1700	
Volume to Capacity	0.00	0.02	0.00	0.16	0.27	
Queue Length 95th (m)	0.0	0.5	0.1	0.0	0.0	
Control Delay (s)	0.0	11.1	8.8	0.0	0.0	
Lane LOS	A	B	A			
Approach Delay (s)	11.1		0.1		0.0	
Approach LOS	B					
Intersection Summary						
Average Delay	0.2					
Intersection Capacity Utilization	32.5%			ICU Level of Service	A	
Analysis Period (min)	15					

Lanes, Volumes, Timings
5: Taylor Road/Taylor Rd & Thorold Townline Rd

Existing Conditions - PM Peak
02/05/2025



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	22	59	25	269	396	15
Future Volume (vph)	22	59	25	269	396	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	50.0	0.0			0.0
Storage Lanes	1	1	1			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.995	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1789	1601	1573	1812	1823	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1789	1601	1573	1812	1823	0
Link Speed (k/h)	50			70	70	
Link Distance (m)	204.8			328.2	1008.3	
Travel Time (s)	14.7			16.9	51.9	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	2%	16%	6%	4%	27%
Adj. Flow (vph)	23	63	27	286	421	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	63	27	286	437	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			7.4	7.4	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	32.1%			ICU Level of Service A		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis
5: Taylor Road/Taylor Rd & Thorold Townline Rd

















Existing Conditions - PM Peak
02/05/2025



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	22	59	25	269	396	15
Future Volume (Veh/h)	22	59	25	269	396	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	23	63	27	286	421	16
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)	7					
Median type				None	None	
Median storage veh						
Upstream signal (m)	328					
pX, platoon unblocked						
vC, conflicting volume	769	429	437			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	769	429	437			
tC, single (s)	6.4	6.2	4.3			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.3			
p0 queue free %	94	90	97			
cM capacity (veh/h)	360	626	1052			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1		
Volume Total	86	27	286	437		
Volume Left	23	27	0	0		
Volume Right	63	0	0	16		
cSH	854	1052	1700	1700		
Volume to Capacity	0.10	0.03	0.17	0.26		
Queue Length 95th (m)	2.5	0.6	0.0	0.0		
Control Delay (s)	12.5	8.5	0.0	0.0		
Lane LOS	B	A				
Approach Delay (s)	12.5	0.7	0.0			
Approach LOS	B					
Intersection Summary						
Average Delay	1.6					
Intersection Capacity Utilization	32.1%		ICU Level of Service	A		
Analysis Period (min)	15					

Lanes, Volumes, Timings
6: Mountain Rd & Garner Road

Existing Conditions - PM Peak
02/05/2025

















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	230	21	30	163	1	13	4	36	2	1	0
Future Volume (vph)	1	230	21	30	163	1	13	4	36	2	1	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.989			0.999			0.908				
Fl _t Protected					0.992			0.988			0.968	
Satd. Flow (prot)	0	1801	0	0	1872	0	0	1690	0	0	1395	0
Fl _t Permitted					0.992			0.988			0.968	
Satd. Flow (perm)	0	1801	0	0	1872	0	0	1690	0	0	1395	0
Link Speed (k/h)		70			70			80			60	
Link Distance (m)		884.7			985.2			693.4			600.2	
Travel Time (s)		45.5			50.7			31.2			36.0	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	6%	0%	0%	2%	0%	8%	0%	0%	50%	0%	2%
Adj. Flow (vph)	1	247	23	32	175	1	14	4	39	2	1	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	271	0	0	208	0	0	57	0	0	3	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	37.1%
ICU Level of Service	A
Analysis Period (min)	15


















HCM Unsignalized Intersection Capacity Analysis
6: Mountain Rd & Garner Road

Existing Conditions - PM Peak
02/05/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	230	21	30	163	1	13	4	36	2	1	0
Future Volume (Veh/h)	1	230	21	30	163	1	13	4	36	2	1	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	1	247	23	32	175	1	14	4	39	2	1	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	176			270			500	500	258	541	512	176
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	176			270			500	500	258	541	512	176
tC, single (s)	4.1			4.1			7.2	6.5	6.2	7.6	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.3	4.0	4.0	3.3
p0 queue free %	100			98			97	99	95	99	100	100
cM capacity (veh/h)	1412			1305			461	463	785	357	457	868
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	271	208	57	3								
Volume Left	1	32	14	2								
Volume Right	23	1	39	0								
cSH	1412	1305	643	385								
Volume to Capacity	0.00	0.02	0.09	0.01								
Queue Length 95th (m)	0.0	0.6	2.2	0.2								
Control Delay (s)	0.0	1.4	11.1	14.4								
Lane LOS	A	A	B	B								
Approach Delay (s)	0.0	1.4	11.1	14.4								
Approach LOS			B	B								
Intersection Summary												
Average Delay			1.8									
Intersection Capacity Utilization			37.1%		ICU Level of Service				A			
Analysis Period (min)			15									

Lanes, Volumes, Timings
7: Beechwood Road & Thorold Stone Road

Existing Conditions - PM Peak
02/05/2025



















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1061	13	1	850	16	9	14	2	4	22	0
Future Volume (vph)	1	1061	13	1	850	16	9	14	2	4	22	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t			0.850		0.997			0.989				
Fl _t Protected								0.982			0.993	
Satd. Flow (prot)	0	3579	1633	0	3565	0	0	1866	0	0	1908	0
Fl _t Permitted								0.982			0.993	
Satd. Flow (perm)	0	3579	1633	0	3565	0	0	1866	0	0	1908	0
Link Speed (k/h)		80			80			80			80	
Link Distance (m)		1007.9			1349.4			495.3			723.5	
Travel Time (s)		45.4			60.7			22.3			32.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	2%	0%	0%	2%	7%	0%	0%	0%	0%	0%	2%
Adj. Flow (vph)	1	1094	13	1	876	16	9	14	2	4	23	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1095	13	0	893	0	0	25	0	0	27	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	40.7%
ICU Level of Service	A
Analysis Period (min)	15











HCM Unsignalized Intersection Capacity Analysis
7: Beechwood Road & Thorold Stone Road

Existing Conditions - PM Peak
02/05/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1061	13	1	850	16	9	14	2	4	22	0
Future Volume (Veh/h)	1	1061	13	1	850	16	9	14	2	4	22	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	1	1094	13	1	876	16	9	14	2	4	23	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	892			1107			1548	1990	547	1444	1995	446
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	892			1107			1548	1990	547	1444	1995	446
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			84	77	100	95	62	100
cM capacity (veh/h)	769			638			56	61	486	77	61	560
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1					
Volume Total	366	729	13	439	454	25	27					
Volume Left	1	0	0	1	0	9	4					
Volume Right	0	0	13	0	16	2	0					
cSH	769	1700	1700	638	1700	63	63					
Volume to Capacity	0.00	0.43	0.01	0.00	0.27	0.39	0.43					
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	11.3	12.5					
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	94.6	99.9					
Lane LOS	A			A		F	F					
Approach Delay (s)	0.0			0.0		94.6	99.9					
Approach LOS						F	F					
Intersection Summary												
Average Delay			2.5									
Intersection Capacity Utilization			40.7%			ICU Level of Service				A		
Analysis Period (min)			15									











Lanes, Volumes, Timings
8: Taylor Road & Beechwood Rd

Existing Conditions - PM Peak
02/05/2025

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	31	289	0	28	414
Future Volume (vph)	0	31	289	0	28	414
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0		0.0	85.0	
Storage Lanes	1	0		0	1	
Taper Length (m)	2.5				100.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865					
Flt Protected					0.950	
Satd. Flow (prot)	1568	0	1883	0	1738	1883
Flt Permitted					0.950	
Satd. Flow (perm)	1568	0	1883	0	1738	1883
Link Speed (k/h)	80		70		70	
Link Distance (m)	79.4		1008.3		713.0	
Travel Time (s)	3.6		51.9		36.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	6%	2%	2%	5%	2%
Adj. Flow (vph)	0	33	304	0	29	436
Shared Lane Traffic (%)						
Lane Group Flow (vph)	33	0	304	0	29	436
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		3.7		3.7	
Link Offset(m)	0.0		0.0		0.0	
Crosswalk Width(m)	1.6		1.6		1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free		Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	31.9%			ICU Level of Service A		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis
8: Taylor Road & Beechwood Rd

Existing Conditions - PM Peak
02/05/2025

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	31	289	0	28	414
Future Volume (Veh/h)	0	31	289	0	28	414
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	33	304	0	29	436
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	798	304			304	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	798	304			304	
tC, single (s)	6.4	6.3			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.2	
p0 queue free %	100	95			98	
cM capacity (veh/h)	347	726			1240	
Direction, Lane #	WB 1	NB 1	SB 1	SB 2		
Volume Total	33	304	29	436		
Volume Left	0	0	29	0		
Volume Right	33	0	0	0		
cSH	726	1700	1240	1700		
Volume to Capacity	0.05	0.18	0.02	0.26		
Queue Length 95th (m)	1.1	0.0	0.5	0.0		
Control Delay (s)	10.2	0.0	8.0	0.0		
Lane LOS	B		A			
Approach Delay (s)	10.2	0.0	0.5			
Approach LOS	B					
Intersection Summary						
Average Delay			0.7			
Intersection Capacity Utilization			31.9%		ICU Level of Service	A
Analysis Period (min)			15			



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	5	26	12	26	55	30
Future Volume (vph)	5	26	12	26	55	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.887				0.952	
Flt Protected	0.992			0.984		
Satd. Flow (prot)	1690	0	0	1853	1806	0
Flt Permitted	0.992			0.984		
Satd. Flow (perm)	1690	0	0	1853	1806	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	307.8			204.8	258.0	
Travel Time (s)	22.2			14.7	18.6	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	0%	2%	2%	2%	0%
Adj. Flow (vph)	6	30	14	30	64	35
Shared Lane Traffic (%)						
Lane Group Flow (vph)	36	0	0	44	99	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	18.7%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis
 9: Thorold Townline Rd/Thorold Townlie Rd & Old Thorold Stone Rd

Existing Conditions - PM Peak
 02/05/2025



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	26	12	26	55	30
Future Volume (Veh/h)	5	26	12	26	55	30
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	6	30	14	30	64	35
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	140	82	99			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	140	82	99			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	97	99			
cM capacity (veh/h)	850	984	1494			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	36	44	99			
Volume Left	6	14	0			
Volume Right	30	0	35			
cSH	959	1494	1700			
Volume to Capacity	0.04	0.01	0.06			
Queue Length 95th (m)	0.9	0.2	0.0			
Control Delay (s)	8.9	2.4	0.0			
Lane LOS	A	A				
Approach Delay (s)	8.9	2.4	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			2.4			
Intersection Capacity Utilization			18.7%	ICU Level of Service	A	
Analysis Period (min)			15			

Lanes, Volumes, Timings

Existing Conditions - PM Peak

10: Thorold Townline Road/Access Road & North West Access Road

02/05/2025



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	9	16	15	2	5	15	3	7	21	31	1
Future Volume (vph)	0	9	16	15	2	5	15	3	7	21	31	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.914			0.970			0.961			0.998	
Fl _t Protected					0.967			0.971			0.980	
Satd. Flow (prot)	0	1414	0	0	1802	0	0	1442	0	0	1879	0
Fl _t Permitted					0.967			0.971			0.980	
Satd. Flow (perm)	0	1414	0	0	1802	0	0	1442	0	0	1879	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		108.3			156.3			390.5			72.5	
Travel Time (s)		7.8			11.3			28.1			5.2	
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Heavy Vehicles (%)	2%	67%	0%	0%	0%	0%	20%	0%	43%	0%	0%	0%
Adj. Flow (vph)	0	13	23	21	3	7	21	4	10	30	44	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	36	0	0	31	0	0	35	0	0	75	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	17.9%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis
 10: Thorold Townline Road/Access Road & North West Access Road

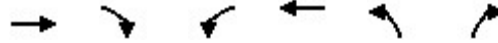
Existing Conditions - PM Peak
 02/05/2025



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	9	16	15	2	5	15	3	7	21	31	1
Future Volume (vph)	0	9	16	15	2	5	15	3	7	21	31	1
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Hourly flow rate (vph)	0	13	23	21	3	7	21	4	10	30	44	1
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	36	31	35	75								
Volume Left (vph)	0	21	21	30								
Volume Right (vph)	23	7	10	1								
Hadj (s)	0.03	0.00	0.36	0.07								
Departure Headway (s)	4.2	4.2	4.5	4.2								
Degree Utilization, x	0.04	0.04	0.04	0.09								
Capacity (veh/h)	828	833	778	847								
Control Delay (s)	7.4	7.3	7.7	7.6								
Approach Delay (s)	7.4	7.3	7.7	7.6								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			7.5									
Level of Service			A									
Intersection Capacity Utilization			17.9%	ICU Level of Service								A
Analysis Period (min)			15									

Lanes, Volumes, Timings
 11: Quarry Access & Mountain Rd

Existing Conditions - PM Peak
 02/05/2025



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	253	1	1	179	1	1
Future Volume (vph)	253	1	1	179	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.999			0.932		
Flt Protected				0.976		
Satd. Flow (prot)	1822	0	0	1874	874	0
Flt Permitted				0.976		
Satd. Flow (perm)	1822	0	0	1874	874	0
Link Speed (k/h)	70			70	50	
Link Distance (m)	184.1			884.7	224.6	
Travel Time (s)	9.5			45.5	16.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	5%	100%	100%	2%	100%	100%
Adj. Flow (vph)	266	1	1	188	1	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	267	0	0	189	2	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	14		24	24		14
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	23.4%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis
 11: Quarry Access & Mountain Rd

Existing Conditions - PM Peak
 02/05/2025



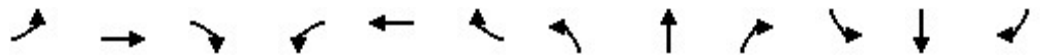
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	→			←	↘	↙
Traffic Volume (veh/h)	253	1	1	179	1	1
Future Volume (Veh/h)	253	1	1	179	1	1
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	266	1	1	188	1	1
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (m)	184					
pX, platoon unblocked						
vC, conflicting volume			267	456		266
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			267	456		266
tC, single (s)			5.1	7.4		7.2
tC, 2 stage (s)						
tF (s)			3.1	4.4		4.2
p0 queue free %			100	100		100
cM capacity (veh/h)			891	417		585
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	267	189	2			
Volume Left	0	1	1			
Volume Right	1	0	1			
cSH	1700	891	487			
Volume to Capacity	0.16	0.00	0.00			
Queue Length 95th (m)	0.0	0.0	0.1			
Control Delay (s)	0.0	0.1	12.4			
Lane LOS	A		B			
Approach Delay (s)	0.0	0.1	12.4			
Approach LOS	B					
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			23.4%	ICU Level of Service	A	
Analysis Period (min)			15			

Lanes, Volumes, Timings

Existing Conditions - PM Peak

12: Thorold Townlie Rd & Thorold Public Works Access/Landfill West Access

02/05/2025



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	0	3	3	0	1	1	28	0	0	66	0
Future Volume (vph)	0	0	3	3	0	1	1	28	0	0	66	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.865			0.973							
Fl _t Protected					0.962			0.999				
Satd. Flow (prot)	0	1662	0	0	1798	0	0	1581	0	0	1921	0
Fl _t Permitted					0.962			0.999				
Satd. Flow (perm)	0	1662	0	0	1798	0	0	1581	0	0	1921	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		102.1			176.5			258.0			689.0	
Travel Time (s)		7.4			12.7			18.6			49.6	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	2%	2%	0%	0%	2%	0%	0%	22%	2%	2%	0%	2%
Adj. Flow (vph)	0	0	4	4	0	1	1	35	0	0	83	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	4	0	0	5	0	0	36	0	0	83	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.5%
ICU Level of Service	A
Analysis Period (min)	15

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	0	0	3	3	0	1	1	28	0	0	66	0
Future Volume (Veh/h)	0	0	3	3	0	1	1	28	0	0	66	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	0	0	4	4	0	1	1	35	0	0	82	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	120	119	82	123	119	35	82			35		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	120	119	82	123	119	35	82			35		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	100	100			100		
cM capacity (veh/h)	854	771	983	852	771	1044	1528			1576		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	4	5	36	82								
Volume Left	0	4	1	0								
Volume Right	4	1	0	0								
cSH	983	885	1528	1576								
Volume to Capacity	0.00	0.01	0.00	0.00								
Queue Length 95th (m)	0.1	0.1	0.0	0.0								
Control Delay (s)	8.7	9.1	0.2	0.0								
Lane LOS	A	A	A									
Approach Delay (s)	8.7	9.1	0.2	0.0								
Approach LOS	A	A										
Intersection Summary												
Average Delay			0.7									
Intersection Capacity Utilization			13.5%		ICU Level of Service				A			
Analysis Period (min)			15									